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Editor :
SUTINDER SINGH

Extra Curricular Activities and Balanced Personality

Shamshad Hussain[*]

The concept of "all-round personality development" has revolutionalised the thoughts of teachers, parents and the intellectuals at large. Now educational institutions are not simply expected to promote intellectual development of the students, and the teachers are not simply supposed to be task masters. The bookish knowledge is not the only requirement on the part of the pupils. In the fast developing society the individual has to compete with others by adopting dynamic modes of adjustment. Life is a continuous process of adjustment in which the individual has to make healthy adjustment by exploring his potentialities and matching them with the environmental requirements. For achieving success in life we have to move in all possible healthy directions. For hitting this target an individual's personality has to develop fully in different spheres of life. His social, emotional, physical and intellectual development has to take place simultaneously. A wholesome personality development is the product of effective intellectual development, healthy social interaction, powerful control over emotions and proper physical growth.

Sports and Games

The necessity for wholesome personality development has intensified the need for extra-curricular and co-curricular activities in the life of man. Now any effective educational system aims at achieving this target. Facilities for promoting sports and games as well as debates and Symposia are to be sufficiently provided, so that the hidden potentialities of the students can flourish.

Participation in games and debates etc helps an individual in developing healthy personality traits and discharging the repressed materials. While participating in different sports and games, traits like punctuality, alertness, cooperativeness, dominance, extroversion, and at the same time submissiveness, competitiveness etc develop fully within the individual. He learns effective ways of dealing with the environmental demands and leading a healthy social life. He may develop leadership qualities and learn ways to organize his actions and thoughts. Further, there may be proper growth of emotional life of the individual. While encountering failure and success in games the individual develops a habit to exercise control over his aggression and frustration and thus to maintain a balance between the pessimistic and optimistic outlook. He develops an inner strength. He becomes ready to tolerate frustrations and enjoy success.

The individuals get an opportunity to discharge their aggression which otherwise might lead to suffocation and destructiveness within themselves. It is our common observation that the hitting behaviour in games like cricket, football, volleyball, hockey and table tennis etc reflects an aggressive tendency of a man which gives an opportunity for discharge of accumulated aggression within the players on neutral objects. The expression of joy in terms of shouting, dancing, clapping etc, provides an opportunity for relaxation or catharsis. All these aspects associated with sports activities clearly suggest their healthy impact on the emotional development of personality. The physical development is also positively influenced by games and sports. The regular exercises and various body movements employed in different activities promote a healthy physique. Besides social, emotional and physical development, the intellectual development is also promoted by games requiring intellectual exercise and mental trial and error and sometimes insight too.

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Elocution and Recitation Contests

Apart from games and sport, an individual's participation in activities like seminars, symposia and debates has its own importance in life. By way of participating in such activities the individual learns how to express his ideas coherently and systematically by way of putting forward his arguments and thoughts forcefully. He develops a skill to defend his thought and to criticize others' views in a highly sophisticated and cultured manner. He develops fearlessness and extroversion which are essential features of a man's personality. He inculcates a habit of reading books, journals, magazines, papers etc which are the source materials for catering to argumentation. He cultivates the habit of organizing materials gathered from different sources in the light of his own views. While criticizing the views of others, an individual indirectly expresses his repressed aggressive tendencies and gets an unconscious relief. If we examine these aspects of extra-curricular and co-curricular activities, we appreciate their healthy psychological impact on the development of human personality.

Through these activities an individual gets an opportunity to express his creative talents with which everyone is endowed. Everybody is potentially creative but what he needs is unfoldment of his hidden potentialities by way of providing a healthy psychological atmosphere for his growth. These facts are to be accepted by the parents and the educationists who can inculcate all possible healthy habits within a child and ultimately can help him in developing a healthy personality which can make the existence of man purposeful, meaningful and enjoyable.

The unrest on the university campus can be put under control to a greater extent if our students get proper facilities and opportunities for reflecting their hidden potentialities and consequently their range of frustrating stimuli will be reduced. Unfortunately the universities in general are not providing adequate facilities for the participation of students in various games and sports and other co-curricular activities which frustrate those students who want their capabilities to be expressed and recognized. No doubt with the advancement in sports and games the expenditures involved are considerably high. Hence special consideration is to be made for the allocation of funds towards meeting the raised expenditure on well equipped indoor stadia, commonrooms, conference halls and sports grounds. They must be developed by the university in collaboration with the state government and UGC and properly trained and enthusiastic personnel made incharge of these activities. The sportsmen are also supposed to keep themselves free from internal politics and try to recognize the merits and achievements of those people who deserve praise and recognition. The correct appraisal of one's assets and limitations and continued struggle to compete with others and excel is the first quality of any sportsman. While selecting players for constituting a team for competitive games, the selectors must also perform their duty quite sincerely without prejudice.

Another important issue related to the involvement of students in extra-curricular activities is the attitude of the parents/guardians. It is a general observation that people attach utmost importance to curricular activities and if their children give much time to sports, games and other extra-curricular activities they are condemned and warned. In the changing scenario this attitude of the parents is to be changed so that they can acknowledge the potentialities and interest of the children in a particular field. However, the students should be trained and educated in a manner which helps them in maintaining a balance between their curricular and extra-curricular activities failing which there will be unrest within those whose merit has not been recognized and they may create problems on the campus and defy the authorities. However, tolerance must be developed within the sportsmen for obeying the decision of the authorities. In the same way the competitive spirit must be developed within the students so that they can tolerate their own failure and the success of others when a game is being played. They must inculcate true sportsmanship and develop faith in the saying "on the day of doom God will not ask whether you have won or lost the game but will simply ask whether you played the game or not". Extra-curricular and co-curricular activities must be promoted as far as possible. We must provide all such facilities to the students which can help them in having a healthy body and a healthy mind. This is the ultimate aim of any educational institution and that of society at large.

(Contd. on page 14)

The Concept of Accountability and Academic Accountability

An Overview

R.P. Shukla*

Introduction

The academic community has accepted the fact that the people have a right to know and judge its performance. The Gnanam Committee Report (*UGC* 1990) acknowledges that "It (Society) is entitled to demand that the members of the academic community individually and collectively be made accountable in concrete, visible terms".

The investment in education, in terms of physical and human resources has grown tremendously. Everyone now wants that education as part of social system should be accountable for resources. Accountability is necessary aspect of educational system. People, whatever may be the type of society, seek education not only for gaining employment but to liberate their mind and to achieve that state of enlightenment which makes man free from any bondage. Educational institutions have an obligation to the society because they are provided with funds and resources by the society (*G.V. Patil,* 1995). Thus accountability is the binding and coordinating force of different factors which assure the success of any assignment undertaken. Its presence is more essential in the field of education where the future of the country is shaped. But this very important force is not harnessed properly in the present educational system (*R.R. Raghavulu,* 1995).

The Need for Accountability

India has one of the largest systems of higher education in the world. But the spread and development in this sector are not uniform. The structure of any institute of higher learning is mainly supported by *Three Components* viz, *Teachers, Students and Administrative Staff*. Therefore, such an institution will be able to discharge its functions successfully provided it receives full support and cooperation from all the components.

A multitude of organisational, administrative, academic and financial deficiencies tend to plague the higher education system. Among them the following factors are prominent (*A. Gnanam,* 1995):

(i) The system has failed to achieve its adumbrated goals of excellence, efficiency and quality.
(ii) There is a glaring dysfunctionality in the relation between higher education and the economy as a result of which we have ended up in a paradoxical situation of scarcity of manpower in certain sectors in the midst of a large ocean of unemployables resulting in heavy brain drain.
(iii) Although the number of institutions have multiplied by leaps and bounds, the system is yet unable to cope with the increasing population as evidenced by the fact that only five per cent of the relevant age group of the country's population is enrolled in higher education.
(iv) The system is haunted by recurrent financial crisis and its heavy dependence on the government has eroded its functional freedom. Consequently most of the institutions are starved of basic infrastructure which has aggravated the deteriorating quality of education. In a situation of inadequate resources devoted to higher education, it becomes more difficult to equalise educational opportunities to all sections of the community. The unfortunate vicious circle of low resources, low quality and low equity continue to remain unshattered by the educational efforts of the nations.
(v) The management of higher education system has become static and complex characterised by over-centralisation or powers, bureaucratisation and lack of autonomy.

Thus the time has come that the higher education has to be saved from further emaciation. One of the several remedies for improving the standrds of universities and colleges and improving the quality of higher education lies in introducing the concept of accountability.

The Concept of Accountability

In the simplest form accountability means the requirement to demonstrate reasonable actions to some external constituency or agency (*Berdahl,* 1990).

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Accountability in higher education means accounting of its performance with respect to the responsibilities assigned to it. It simplifies the actual measurement of the responsibility fulfilled or performed by an institution. The degree of accountability can be perceived only when the functions and duties assigned to the agencies in the system are properly evaluated. In other words, performance evaluation becomes an integral component of the concept of accountability. In fact, accountability, responsibility and performance evaluation are mutually related. They are considered to be the acid tests for measuring efficiency and proficiency of the system of higher education (*A. Gnanam, 1995*).

Accountability has two aspects—*moral* and *legal* or *contractual* (*Wagner*, 1989). Wagner (1989) analysis the meaning (and concept) of accountability. Firstly, accountability may be taken as an obligation to give an account (of one's performance) in the form of a report or some other form of exposition. Secondly, it may mean being answerable for one's actions. Government would probably prefer the latter alternative. In fact both forms of accountability are being practised in our universities to a limited extent (*K.B. Powar,* 1995).

Moral Accountability is based upon a sense of responsibility — a feeling that one is responsible to one's clients (students and parents), colleagues and oneself.

Legal Accountability is being responsible to one's employer in terms of fulfilment of terms of employment.

It is possible to satisfy legal responsibility yet not live upto moral responsibility. A teacher may take his classes according to schedule, but in a disinterested manner fulfiling the requirements of legal accountability, but not of moral accountability. An official may likewise, 'work' eight hours a day, merely forwarding files to his superior without contributing to decision making. It is therefore desirable to shift the emphasis from legal accountability to moral accountability.

There are two types of accountability from *Analytical Perspective*, namely, Macro and Micro accountability (*A. Gnanam* 1995).

Macro Accountability : It is called social accountability and refers to the responsibilities of the university system to the society represented by the students, parents and the government. It is normally measured with respect to its objectives. This is what exactly the system of higher education is expected to do and what is exactly achieved and why there occurs a gap in the expectation. Macro accountability, therefore, presupposes the formulation of clear cut goals and objectives which should be made known to the society well in advance. Macro accountability is difficult to measure and achieve as it involves normative judgment and connotation. Therefore, the objectives should be expressed in some concrete form, usually in terms of quantitative performance indicators, so that the achievement of the university during a period of time can be easily compared with the objectives and the gap between expectation and performance can be analysed and responsibilities fixed for any shortfall or lapse.

Micro Accountability : It is concerned with the responsibilities and performance of each one of the functionaries within the system — academics, administrators, and the various bodies of the university to the management board as to what they have accomplished towards the overall objective of university during the given period of time. In other words, micro accountability can be conceived in three forms : Administrative Accountability, Academic Accountability and Financial Accountability.

Autonomy and Accountability

Accountability is linked with excellence and autonomy. Promotion of excellence is a pre-requisite for the maintenance of standards in higher education Autonomy does not mean freedom from accountability. As a matter of fact, autonomy and accountability go hand in hand.

Autonomy may be described as the power to act without external control. It is to be viewed as an organisational or managerial requirement for the fulfilment of responsibilities (*Sarup,* 1993). Autonomy and accountability are mutually complementary. An individual or an institution cannot be held responsible for (lack of) performance if it has not been given the requisite freedom to act. It is necessary to attain a balance between accountability and autonomy for, as Berdahl (1990) points out "too much autonomy might lead universities to be unresponsive to society; too much accountability might destroy the necessary academic ethos".

The concept of university autonomy as Ashby (1966) points out is that "the question as to what constitutes autonomy in universities is anything but unambiguous, and the patterns of autonomy which satisfy academics in different countries are very diverse". The Gajendragadkar Committee Report (*UGC* 1971) states "The concept of university autonomy is often misunderstood. It is not a 'legal concept', not even a 'constitutional concept'. It is an ethical concept and an academic concept. This concept does not question that, in a democratic society like ours, legislatures are ultimately sovereign, and have a right to discuss and determine the questions of policy relating to education, including higher education..... The concept of university autonomy, however, means that it would be appropriate on the part of democratic legislatures not to interfere with the administration of university life, both academic and non-academic. The claim for autonomy is made by the universities not as a matter of privilege, but on the ground that such an autonomy is a condition precedent if the universities are to discharge their duties and obligations effectively and efficiently".

Academic Freedom and Academic Accountability

Tight (1988) points out "academic freedom refers to the freedom of individual academics to study, teach, research and publish without being subject to or causing undue interference". Powar (1995) says "It does not confer upon the academic community unfettered rights of action or behaviour The concept of academic freedom enjoins that the teacher be allowed to express his views freely and openly, even though they may be at variance with the 'Official' view, without fear of being penalised. However, the academic freedom does not extend to, for example, neglecting teaching assignments in favour of research interest. Academic freedom is a privilege that carries with it the responsibility of ensuring that it is used only for the welfare of the academic community and the good of the present institution".

Academic Accountability

The people involved in academic accountability are teachers, learners, administrators and policy makers. Academic accountability is a broad concept which means that people involved in it are required to carry out or to see to it that certain tasks assigned to them or their institution are carried out. Teachers occupy the most important position and are expected to play a very important role as they are to impart knowledge, help learners, facilitate learning, revise syllabi, devise innovative courses, adopt innovative practices and systems of evaluating student's achievement. Teachers are expected to play a multiple role to help all the categories of students — gifted, talented, average and backward and students coming from the weaker sections of the community and from rural and tribal areas. The prime role, teachers are to play is to develop human resources and to promote academic excellence. Teachers are the central pivot in any education system and teaching is the heart of performance of education institutions and in fact teaching responsibility is equated to the institutional accountability in many cases.

It is commonly agreed that the teachers must be made accountable to the students and through them to the society. Thus teachers are accountable for their performance and they have to follow the code of conduct and ethics, as prescribed by concerned institutions, governing bodies, government and other agencies.

For ensuring academic accountability, a few out of many essential steps, need to be adopted are — self reporting, performance appraisal and developing an effective institutional climate for student growth. All these together constitutes professional accountability and a teacher who satisfies it, be treated as professionally accountable on both moral and legal grounds. Above all, before giving any judgment on teacher's accountability, the requirements of teaching job in general and requirements of specific task assigned to a teacher be ensured. It should also be remembered that academic/professional accountability also depends upon how clearly the objectives of education at different levels are stated and accordingly the roles and responsibilities are worked out for all the people involved in the process of education. And in the shaping of the personality of students, it is not only the teachers who play their roles; parents too have to play their role; the community has to play its role; the educational system has to play its role.

Criteria for Assessing Teacher's Accountability

The following criteria (having moral and legal bases) may be considered to ensure teacher's accountability to their students, their parents, their community and their profession :

(i) Regularity and punctuality of the teachers in performing their jobs.

(ii) Innovative methods of teaching evolved and or adopted for effective teaching, leading to generating interest and motivation and independent thinking on the part of students.

(iii) The number of level of courses taught and developed.

(iv) Coordination and cooperation extended to colleagues and authorities.

(v) Contribution to the construction of curriculum, design of evaluation methods, preparation of learning/reading materials, and roles played in student counselling and remedial teaching.

(vi) Participation in refresher/orientation courses, workshops, seminars, symposia, conferences etc at different levels.

(vii) Number and quality of research papers published, research projects undertaken and Ph.Ds guided.

(viii) Seminars, conferences and symposia organised at university level, state level, regional level, national level and international levels.

(ix) Fellowship, awards and recognition received.

(x) Higher position secured outside the institution.

(xi) Office held in national or regional or International organisations.

(xii) Contribution in resolving the social issues, institutional issues, and issues related to national concern and priorities.

(xiii) Contribution to environmental preservation, eradication of illiteracy and population education.

(xiv) Contribution to the growth of the institution, co-curricular activities and extension services.

(xv) Implementation of comprehensive objective evaluation system in overall evaluation process of the institution.

(xvi) Role played in enrichment of campus life, student welfare and ensuring quality education leading to human resource development and excellence.

(xvii) Feedback received from students' evaluation of teachers to modify his/her teaching.

(xviii) The code of conduct and professional ethics followed.

(A few of the above criteria are referred from the suggestions made by *Gnanam,* 1995)

In order to motivate teachers to put in their best it may be useful to link "Promotion to Performance" (*S.K. Verma* 1995). The assessment of academic performance will be too vague if centralised and likely to be too biased if it is totally decentralised. Therefore, fixing the responsibility in academic aspects and monitoring and evaluation of the same need to be with cross checks. It will be appropriate if assessment of academic responsibilities is done in a "Two Directional Approach". This means getting assessment of juniors by senior as well of senior by juniors. The teachers may also be assessed by students (*P. Vittal Rai* 1995). Non-performing teachers, departments and institutions must be subjected to social and system-based audit. They should be ranked in terms of their performance. Enforcement of teachers' accountability should begin with recruitment/selection of teachers who show evidence of continued academic interest, followed by training to cope up with the curriculum and research and orientation about the responsibilities towards academics and administration. A teacher will be able to do justice to the profession of teaching only if he/she is well-read, in touch with latest technologies of teaching and training. Teachers' professional accountability needs reasonable freedom to innovate and regulate his/her own work and evaluate his/her students.

To conclude, it may be mentioned that it is very difficult to fix academic/professional accountability. Of course self realisation would be the best approach to ensure accountability on the part of teachers. Moral values of accountability and legal values of accountability should go hand to hand and work as complementary and supplementary factors to each other to sustain the broader concept of accountability. *Programme of Action* (1986) emphasised teachers' accountability to the pupils, their parents, their community and to their profession. It further stated about incentives for good performance and disincentives for non-performance, as norms of accountability. This needs to be strictly followed by all the institutions. Assessment of performance and promotion/professional growth of teachers may be done by adopting the two directional approach and linking promotion to performance.

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Effect of Computer Assisted Instruction in Economics

K. Anandan*

The excessive verbalism in the conventional method of teaching has lost its efficacy and students' interest in subject. The present day students are being influenced by a number of new media such as TV, Video, Computer etc. Among all other media, computer has been accepted as an important tool to amplify the learning capacity. The large amount of information stored in computer is made available to the learner more rapidly. The dynamic interaction between the student and instructional programme is possible through computer than any other media.

Tailor (1980) has pointed out that computers are found to be better than any other aid in several respects. According to Batra (1989), Computer Assisted Instruction (CAI) refers to a learning situation in which student interacts with (and is guided by) a computer through a course of study aimed at achieving certain instructional goals. Kulkarni (1986) stated that a teacher is presenting his messages with teaching aids like chalkboard, charts etc. Radio and television went further and broke the walls of a classroom and took over many functions which no human teacher can ever perform and that too at a place and time convenient to the learner.

Overview of Literature

Since the usage of computer for classroom instruction is less popular in the schools in India and its development is in initial stage, only few studies at Ph.D. and M.Phil level have been conducted. Studies conducted in Science (Natchimuthu, 1986; Shilaja and Lalitha, 1986; Chandra 1987; Mohan, 1987, Singha, 1988) and studies done in Mathematics (Sharma, 1979; Sivaraj, 1988; Palaniappan, 1989; Stella, 1989) showed that CAI made more effective achievement of the students in Indian context.

Notable studies and projects have been reported in many of the countries like United Kingdom, USSR, Germany, Japan, Denmark, Ireland etc. CAI students score higher than the control group students in more studies (Tailor, 1980; Pamela, 1983; Abraham and Sandma, 1984; Ester 1984; Opera and Mika, 1984; Porincheck, 1984; Saesar and John, 1984; Delton, 1985 and Maxhensy, 1985).

Rational for the Study

Mukhopadhyay (1989) mentioned that 3500 educational institutions were provided with computer facilities under the project 'Computer Literacy and Studies in School (CLASS) and this number is likely to be increased to about 15000 in another few years. Moreover, many Aided and Matriculation Schools in India are already having computers and have started to use CAI. The measures taken by the government reveal that it tries to make use of the advantages of CAI found in different studies conducted abroad and in India. The present investigator felt that there was a need to conduct a study to measure the effectiveness of CAI in the existing conditions over the conventional methods of instruction in our country. Economics, being the investigator's major subject in post-graduation, the study was conducted in measuring effectiveness of CAI in Economics.

Objectives of the Study

The major objective of the study was to find out the effectiveness of CAI in Indian Economics of 11th standard English Medium students. The specific objectives were

(i) To construct and validate a criterion test and CAI package in Indian Economics.

(ii) To find out the effect of CAI package on the achievement in the components, namely, knowledge, comprehension and application in Indian Economics.

(iii) To find out the effect of CAI package on achievement after keeping intelligence and socio-economic status of 11th Standard students as covariates.

Methodology

The nature of the experiment was Pre-Post Equivalent Group Design. Teaching of Indian Economics through CAI for 11th standard was independent variable and achievement in Indian Economics was the dependent variable. The co-variates in the study were intelligence and socio-economic status of the students. Group test of Ahuja and socio-economic status scale of Kuppusamy were used. Two experimental groups, namely, Experimental-I and Experimental-II had the student strength of 19 and 14.

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The strength of the Control Group was 34. Achievement Test in Indian Economy (ATIE) was constructed and validated by the investigator for measuring the dependent variable. Duration of the experiment was 12 weeks.

Development of Criterion Referenced Test

In order to measure the dependent variable, Achievement Test in Indian Economics (ATIE) was developed. Investigator decided to have multiple choice items. The framed items were on three levels, namely, Knowledge, Comprehension and Application according to Blooms (1954). Mainly correct answer type and the best answer type items were developed for the present study. After the investigator was himself satisfied with the items prepared, it was shown to two economics teachers of 11th standard and two teacher educators for verifying the suitability of the items for the target students. After carrying out the additions and deletions of items, there were 95 items in all the 10 units in Indian Economics. All the items were cyclostyled and administered to the sample for item analysis. According to the norms pointed out by Ebles (1966) and Marshall and Hales (1971), 75 items were selected as 24, 25, 26 for the components of Knowledge, Comprehension and Application respectively. Split-half method was followed to find the reliability of the tool. It was found to be 0.86 which showed a high reliability of the tool.

Development of CAI Software

The development of CAI package consisted of two phases : (i) development of Programmed Learning Material (PLM) in Indian Economics for 11th standard students, and (ii) converting the developed PLM in the CAI.

First the list of ideas to be taught under the topics selected was prepared. The ideas thus collected were arranged in sequence. Based on the sequence, each idea was considered for the development of the frame. The number of teaching frames were-94, testing frames-20, Bar diagrams-2, Graph-2, Pie diagram-2. While constructing frames different types of frames were prepared. After completing the first draft of all the frames, a thorough review was made followed by editing. It was edited in three phases, viz., Technical Accuracy edit, Programming Technical edit and Composition edit. Then it was cyclostyled for individual try-out. After carrying out the classifications it was again cyclostyled and administered for group try-out. With the revisions made as the result of the group try-out, field try-out was conducted.

The developed PLM was converted into CAI package. The BASIC Language was selected for developing the CAI. One can select his own topic from the menu presented in a frame by pressing the appropriate serial number of the units to be learnt. After taking his own time to read the content in the frame, he has to press any key in the key-board. Now the student has to respond to the question by taking either in capital or small letter. The answer will be checked by the computer. If the answer is correct, it will say, 'Good' you can proceed'. If the responded answer is wrong, computer will say, 'answer is wrong'. Then the same frame will be presented again to read the content carefully. The CAI package was tested among 10 students of Kendra Vidyalaya, Madurai. Eight students scored around 85 per cent while the other two scored around 75 per cent. From this, it was surmised that the developed software was valid for external use.

Data Analysis

The investigator wanted to find out whether there was any significant difference in the Mean achievement in Indian Economics between the pairs of groups For that, t-test was applied. The results of the same pre presented in Table 1.

Table 1. Significance of Difference of Means in Achievement in Indian Economics between Control and Two Experimental Groups (ATIE-t-TEST)

S No	*Groups*	*N*	*Mean*	*SD*	*'t' value*	*df*
1.	Control	34	30.1471	3 3767		
					10.3614**	51
2	Experimental-I	19	40 4737	3 4216		
	Control	34	30.1471	3 3767		
					5 2021**	46
	Experimental-II	14	38.6426	4.8613		

**Significant at 0.01 level

The t-values of 10.3614 with df 51 and 5.2821 with df 46 in Table 1 are considered to be significant at 0.01 level. From the observation of the Means achievement, the achievement of two Experimental groups is superior than the Control group.

Table 2. Significance of Difference in Achievement in the Components of Indian Economics Among Control and Two Experimental Groups (ATIE - 't' TEST)

S No	*Groups*	*N*	*Mean*	*SD*	*'t' value*	*df*
1.	**Knowledge**					
a	Control	34	10.3824	2.4743		
					10 1802**	51
	Experimental-I	19	16.8421	1.9794		
b	Control	34	10.3824	2.4743		
					6.4029**	46
	Experimental-II	14	15.7143	2.8670		
2.	**Comprehension**					
a.	Control	34	8.3235	1.7705		
					8.0480**	51

	Experimental-I	19	12.2105	1.5839		
b.	Control	34	8.3235	1.7705	4.4087**	46
	Experimental-II	14	11.2857	2.1636		
3.	Application					
a.	Control	34	11.4706	1.8461	0.8909 NS	51
	Experimental-I	19	11.4211	1.9527		
b	Control	34	11.4706	1.8761	0.2795 NS	46
	Experimental-II	14	11.6429	1.8650		

**Significant at 0.01 level NS - Not Significant

It is inferred from Table 2 that the Control group students stay behind significantly from Experimental group-I and Experimental group-II students in their achievement in Indian Economics for the two components, namely, Knowledge and Comprehension. But for the component of Application under achievement in Indian Economics, there is no significant difference between the pairs of the sample groups of students. The t-values of 0.8909 with df 51 and 0.2795 with df 46 are not significant.

In order to find out the level of significance of mean differences on the achievement in the components of Indian Economics after adjusting the initial differences on Intelligence among the pairs of the sample groups of 11th standard students, t-test was used. Table 3 presents the result of the analyses.

Table 3. Significance of Difference in Achievement in the Components of Indian Economics after Adjusting Intelligence Between Control and Two Experimental Groups

S.No.	*Groups*	*N*	*Myx adjusted*	*'t' value*	*df*
1	**Knowledge**				
a	Control	34	10.38	8.3916**	51
	Experimental-I	19	16.38		
b	Control	34	10.38	6.6708**	46
	Experimental-II	14	15.71		
2.	**Comprehension**				
a	Control	34	8.33	6 1259**	51
	Experimental-I	19	12.21		
b	Control	34	8.23	3.8172**	46
	Experimental-II	14	11.28		
3	**Application**				
a	Control	34	11.44	0.0280 NS	51
	Experimental-I	19	11.42		
b.	Control	34	11.44	0.2503 NS	46
	Experimental-II	14	11.64		

**Significant at 0.01 level NS - Not Significant

The observed t-values of 8.3916, 6.6708, 6.1259 and 3.8172 in Table 3 between Control group and Experimental group-I and Control group and Experimental group-II for the components of Knowledge and Comprehension are found to be significant at 0.01 level. There is no significant difference on the adjusted means for the component of Application under Means achievement in Indian Economics.

Table 4. Significance of Difference of Means in Achievement in the Components of Indian Economics after Adjusting Socio-Economic Status Between Control and Two Experimental Groups

S No	*Groups*	*N*	*Myx adjusted*	*'t' value*	*df*
1.	**Knowledge**				
a.	Control	34	10.36	9.0661**	51
	Experimental-I	19	16.83		
b	Control	34	10.36	6.7344**	46
	Experimental-II	14	15.73		
2.	**Comprehension**				
a.	Control	34	8.31	5.4512**	51
	Experimental-I	19	12.20		
b.	Control	34	8 31	3.8817**	46
	Experimental-II	14	11.29		
3.	**Application**				
a.	Control	34	11.44	0.0362 NS	51
	Experimental-I	19	11.46		
b.	Control	34	11.44	0.3241 NS	46
	Experimental-II	14	11.64		

**Significant at 0.01 level NS - Not Significant

The observed t-values of 9.0667, 6.7344, 5.4512, 3.8817 with df of 51 and 46 (Table 4) respectively for the components, such as, Knowledge and Comprehension between Control group and Experimental group-1 and Control group and Experimental group-II are found to be significant at 0.01 level. But the t-values of 0.0362 with df of 51 and 0.3241 with df of 46 for the component of Application after adjusting the initial differences of socio-economic status are not found to be significant.

Findings

(i) From the perusal of the data analysis, it was found that CAI had produced significant positive effect on the achievement on Indian Economics when compared with traditional method.

(ii) It was found that significant favourable achievement was made in the components of Knowledge and Comprehension but not in Application.

(iii) It was also observed that there were significant differences favouring CAI even after controlling the intelligence and socio-economic status of the students.

Educational Implications

As the study has demonstrated that CAI produced significant positive difference in the achievement upon the Knowledge and Comprehension aspects, CAI can be confidently used as an effective technique of teaching for Knowledge and Comprehension aspects of Indian Economics to the Higher Secondary students. As the availability of computers in schools is increasing, the CAI technique could be good alternative to the lecture method. The government can prepare and distribute the validated software to the schools to enjoy the maximum return on the investment made on education.

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MALAVIYA REGIONAL ENGINEERING COLLEGE,

JAIPUR (RAJASTHAN)

ADMISSION NOTICE, 1998-99

Applications on prescribed form are invited from eligible candidates for admission to M.E Full Time (Three semester) and M.E. Part Time (Five semester) programmes in the following disciplines The scheduled date of written test and interview/counselling is mentioned below. **Separate application form is required for each course.**

S. No.	Discipline	Prog.& No. of Scholarship	Eligibility	Date of Test/Interview at 09.00 A.M. for both full time and part time
1	(a) Water Resources Engg (b) Transportation Engg (c) Environmental Engg.	M.E (10) M.E.(Nil) M.E. (Nil)	B E./AMIE (Civil) -do- B.E./AMIE (Civil/Electrical/Chemical/Mechanical/Metallurgical) or 60% marks in M.Sc. (Chemistry/Geology)	25 7 98 27 7.98 28.7 98
2.	Power System	M.E. (10)	B.E./AMIE (Electrical)	25 7.98
3	Electronics & Communication Engg	M.E. (10)	B.E. (Electronics & Comm./Electrical)/Grade IETE	29 7 98
4.	Manufacturing Systems Engg.	M.E. (Nil)	B.E. (Mechanical/Production/Industrial Engg.)/AMIE	29.7 98
5.	CAD in Structural Engg.	M.E. (Nil)	B.E./AMIE (Civil)	29 7 98
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Candidates with II class B.E degree in relevant branch or 55% marks in AMIE/Grade IETE Section A and Section B examination after Diploma in relevant branch with I division from University/Board recognised equivalent or higher by the Rajasthan University are eligible and they should report along with all the original documents/certificates and a fee of Rs 6100/- (2050/- in case of SC/ST) For Part Time courses fee is 7500/- per semester. No TA/DA will be admissible for the Test/Interview. Hostel accommodation is available for regular M E. Students

Candidates appearing in the qualifying examination & expecting result by September,98 can also apply.

Other details will be made available along with the application from which is obtainable from the undersigned on payment of Rs. 300/- either in cash or in the form of a crossed Postal Order in the favour of Registrar, Malaviya Regional Engineering college, Jaipur. **Last date for receipt of completed application form is July 18,1998.**

(Dr. S.L. Solanki)
Faculty Incharge
(Adm.&Exam.)

SHAKUN

Women's Perspective in Home Science Education

21st Century's Need for Rural Development

Saroja Krishnaswamy*
Meera Rao**

Women in agriculture make up a substantial portion of Indian rural population. Their work force in activities of agriculture and allied fields is enormous. According to the 1991 census in India, 38 per cent of all agricultural labourers, 20 per cent of cultivators and 29 per cent of all livestock and forestry workers are women. Agriculture was found to be the highest employer of women's labour to the extent of 84 to 97% in India.

There is no denying the fact that rural women have been contributing largely to the nation's economy which is mainly agriculture based. Their share of labour is particularly significant in the context that they actually perform their agricultural work in addition to arduous work of cooking, child rearing and collection of fuel, fodder and drinking water. However, unfortunately agriculture is the sector where women's role as unpaid labour in production activities both at home and farm is most prominent. Whenever they are paid for agricultural activities they suffer discrimination and exploitation in wages in spite of legislation (*Report of National Commission on self employed women and women in informal sector* 1988). Lack of organization of agricultural labour, non-permanant nature of work, no accident relief, lack of creche facilities, education, health care, drinking, water, sanitation etc contribute to their hardships.

At this juncture it becomes necessary to examine the role of state agricultural universities (SAUs), in rural development against the back drop of the enormous female workforce in Indian agricultural scenario and the magnitude of problems of this work force. So far, it appears that training, information, resources and extension programmes have concentrated on men, reserving areas like Home Science and nutrition education for women. Agricultural development projects have also bypassed women. Women's participation in agriculture in particular and national economy in general needs to be acknowledged and women's participation needs to be meaningfully incorporated in planning agricultural development. The present socio-economic political system and perceptions and attitudes of people towards women need to be changed. Policy makers, planners and concerned government departments which implement programmes for rural development need to properly perceive the importance of women's role in agriculture to make women equal partners in the process of development. Towards this SAUs have an important role to play in two ways : Firstly SAU's should create sufficient number of women professionals to cater to the developmental needs of the rural women. Secondly, SAUs should introduce women's perspective in Agriculture education in general and in Home Science education in particular.

In connection with the implementation of these two suggestions, it is imperative for all educationists working in SAUs to introspect on the following 3 issues : (i) Whether the State Agricultural Universities have sufficient professional female work force which is oriented to the problems and needs of the rural women and trained well to empathize and help poor rural women? (ii) Whether the education offered by SAUs including Home Science education provide the students with the proper women's perspective needed to understand and empathize with the rural women and their problems? and (iii) Whether there is a need for creating a separate Regional Centre for advanced studies on Women in Agriculture as an answer to the first two issues and to direct and consolidate all teaching, extension and research work related to women in rural development. In addition whether such a centre needs to monitor and evaluate the benefits if any, emerging out of research and extension work of SAUs, to ensure that such benefits really reach the rural women is another vital issue to be examined.

Firstly, it may be noted that the number of professional women in SAUs is extremely small when compared to the enormous size of female cultivators and women agricultural labourers. According to 1992 figures in 27 SAUs the female representation in professional work force was a mere 2%. In addition the poor female student out turn in SAUs is an another vital issue which is inextricably interlinked with the problem of poor representation of professional

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women in SAUs. In view of these issues, there appears to be a need for introducing some changes in policies and programmes of State Agricultural Universities.

Some suggestions made in an effort to answer these issues in this paper are as follows :

1. Increase the number of Home Science colleges in each SAU (at least 2 per SAU) and reserve 30 to 40% of seats for girls in all faculties of State Agricultural Universities.
2. Introduce courses in Women studies regarding Rural and Tribal Women studies, Women and development, Women and ecology, Women and forestry etc, which should be made compulsory for all students both male and female at undergraduate and postgraduate level to orient them to have women's perspective.
3. Creation of Regional Centres for Advanced studies on Women in Agriculture to study the needs and development of rural, tribal, SC and ST women and professional women in agriculture in the respective states.

Reservations for Women

The first suggestion is based on the fact that the female student out turn is very poor in SAUs barring SAUs of few southern states. For e.g. in the University of Agricultural Sciences, Dharwad out of 398 students who obtained their UG, PG and Ph.D degrees in 1997 only 64 were girls. Among 118 postgraduates only 21 were girls and out of 31 candidates obtaining Ph.Ds only one was a girl (Table 1). It is interesting to note that 69 per cent of total female student out turn was from the faculty of Home Science. The poor out turn of girl students from other faculties in SAUs indicates a need to reserve 30 to 40% seats for girls in agriculture faculties and to motivate them to join agriculture education. As Home Science attracts girls easily, it is necessary to simultaneously open more Home Science colleges in each SAU.

The necessity for a reservation policy for girls in admission to all faculties of agriculture and opening more Home Science colleges is justified by the fact that these girls can be expected to enter the work force of professionals intending to cater to the needs of the rural women. Female professionals in extension, research and training would certainly have an edge over males not only in empathizing and reaching rural women but also in developing and transferring appropriate technologies required by women cultivators and labourers both at home and farm.

It may be noted that at present there is a need to make the Home Science graduates and postgraduates very well trained and properly oriented towards issues of rural women in particular and issues of rural development in general. This is necessary to make them successful in working as professionals in the process of rural development in the forthcoming 21st Century. In this direction there appears to be a need to modify the curriculum in each branch of Home Science education by including the following elements. These are :

(a) The ways and means of identifying the rural women's needs which come in the ambit of the specific disciplines in Home Science, with the active and enthusiastic participation of rural women.

(b) Concentrate on studying women specific needs and problems and focusing research on these needs with the aim of finding answers and developing suitable technologies useful for women both at home and farm.

(c) Developing modules for transfer of knowledge and skills to rural women.

In addition Home Scientists must become an important active link between other agriculture Scientists and rural women in transferring appropriate technologies in various ways by (i) promoting networking among women farmers, (ii) emphasising and impressing upon agricultural scientists the need to generate technologies for both farm and home, and (iii) tailoring the technical knowledge and skills needed by rural women, to their socio-economic level and literacy status.

Introduction of New Courses

Second suggestion regarding introduction of courses in Women Studies both at UG and PG level is made with a view that there is an urgent need to develop among students, the women's perspective and the necessity to appreciate the role of women in agriculture and allied fields. Since the discipline of women studies is a critical instrument to study the reality from the standpoint of women, courses in Women Studies help students to properly understand the rural women's roles, responsibilities, needs and problems. There is also an imminent need to impress upon them that the real sustainable rural development is impossible without the participation of women and with the present largely male oriented research and extension which is carried out without sufficient regard for the needs, problems and participation of women. Hence introducing courses in women studies such as "Rural and tribal women in development", "Women and Environment/Ecology", "Women and Subsistence Crops", "Women and Rural Technologies", "Women and Forestry" and similar courses need to be introduced for all students both male and female. This is essential as SAUs students form the future work force involved in creating and transferring appropriate technologies and implementation of several developmental programmes in rural areas. As such, such a work force needs to have a holistic and empathetic understanding of social realities, gender issues and gender equity. In addition they need to be aware of bottlenecks in developing effective and appropriate technologies and implementation of both technologies and programmes for rural development and specifically for the development of women's skills and capabilities.

This point is clearly highlighted in the findings of three recent studies conducted in 1994, 1996 and 1997 which were carried out in the Western Ghats Forestry Project area in Karnataka State. This project aims at promoting the local people's participation in decision making about planning and management of forest resources and to promote institutional changes in Karnataka Forest Department. Findings of these studies have pointed out the lack of participation of women and marginalised groups in village forest committees (*Department For International Development Britain KFD* 1997, *Jennings* 1994 and *Correa* 1996). The need to address gender and equity issues was identified and the provision of a gender and equity specialist who could support the participation of women and other marginalised groups in the project area was recommended by these studies. Other recommendations were for recruiting women staff in Karnataka Forest department and provision of inservice gender training. It may be noted that the lack of participation of marginalised groups and women is often blamed for the failure of several rural development programmes of the government departments. NGOs, some institutes of ICAR and few KVKs have recognized the importance of participation of women and they are promoting the collective participation of the women with considerable success (*Manage* 1995).

Thus the introduction of courses in Women Studies in SAUs in general and in Home Science colleges in particular may be expected to help students to have a good orientation to gender and equity issues and to have a holistic perspective of the process of development. A beginning has already been made in UAS, Dharwad by introducing an introductory PG course titled 'Women Studies' which is being offered for the last two years. PG courses in "Tribal and Rural Women Studies", "Women and Health" and "Women and Ecol-

Table-1 : Student Out turn in 1996-97 in University of Agricultural Sciences, Dharwad

Discipline	*UG*		*PG**		*Ph.D*		*Total*	
	Number of Girls	*Total number of students*	*Number of Girls*	*Total number of students*	*Number of Girls*	*Total number of students*	*Number of Girls*	*Total number of students*
Agriculture	12	146	5	86	—	24	17	256
Agricultural Engineering Technology	—	23	—	—	—	—	—	23
Animal Science	—	—	—	—	—	—	—	—
Dairy Science & Technology	—	—	—	—	—	—	—	—
Fishery Science & Technology	—	—	—	—	—	—	—	—
Forestry	—	16	—	—	—	—	—	16
Food Science	—	—	—	—	—	—	—	—
Horticulture	—	—	2	18	—	6	2	24
**Home Science	29	29	14	14	1	1	44	44
Sericulture	—	—	—	—	—	—	—	—
+AgMaco	—	7	—	—	—	—	—	7
Veterinary & Animal Husbandry	1	28	—	—	—	—	1	28
Total	42	249	21	118	1	31	64	398

*Includes : M.Sc (Agri.) with specialization in 10 disciplines of agriculture and M.Sc. degree, in (1) Agricultural Extension education (ii) Agricultural Microbiology & (iii) Agril. Economics.

**PG in Home Science — 4 fields of specialization in HSc.

+Agricultural Marketing and Co-operation.

ogy" are under consideration. An introductory course on women studies for UG level is under preparation.

Regional Centres

The third suggestion refers to the creation of 'Regional Centres for Advanced Studies on Women in Agriculture at Zonal level to cover all State Agricultural Universities of the region. Even though there are several research centres for women studies operating in non-agricultural universities funded by UGC none have their researches focused mainly on the problems and needs of rural and tribal women. In the absence of research centres with main focus on these marginalized groups of women, the State Agricultural Universities appear to provide an appropriate and suitable institutional setting for creation of such research centres. The main functions envisaged for such centres may be listed as follows.

1. Creation of complete database on respective State's rural, tribal and SC and ST women as well as professional women in Agriculture.
2. To identify gender and equity issues posing obstacles in the development and empowerment of rural women.
3. Developing, testing and implementing intervention programmes for rural and tribal women's development and empowerment.
4. Conduct regular courses to orient extension workers, village functionaries, teachers, scientists and students etc towards the need to recognise the gender bias preventing effective participation of half of the rural population in developmental process with consequent adverse effects on holistic rural development. Such orientation courses or gender training are to be directed towards creating an awareness regarding the necessity for appreciation of the complex relationship between rural poverty, deprivation and well being. Such an awareness is required to evoke participation by interacting with groups of poor women. Such interaction can empower women to explain their perceptions, present their indigenous knowledge systems, their probolems and abilities.
5. Offering regular courses to students to train them to have women's perspective so that they can in future carry out their work effectively in government, quasi-government and non-government organizations involved in programmes for rural development.
6. Producing knowledge and guidelines useful for policy makers, government and NGOs to enhance women's status.
7. Coordinating and assisting in research teaching and extension work related to women carried out in the respective SAUs.

In each zone, these centres for Advanced Studies on Women may be established preferably in Home Science Colleges with postgraduate programmes. Home Science teachers trained in Women Studies, those who have carried out sufficient research on women's issues and those having women's perspective incorporated in their teaching, research and extension work should initiate action and gain support to start such centres in their respective universities.

In conclusion, having a reservation policy to increase admission of girls to SAUs, introduction of courses in women studies and creation of Regional Centre for Advanced Studies on Women in Agriculture, in Home Science colleges can usher a new era in Home Science education in 21st Century offering rural women better and meaningful services by both Agriculture and Home Science professionals.

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Extra Curricular Activities and Balanced Personality

(Contd. from page 2)

On the whole, an intensive analysis and deeper observation of an individual's participation in extra- and co-curricular activities suggests that such activities pave healthy ways for speedy development of personality and generate a strong sense of discipline. In the light of my long association with sports and games as a student, as a teacher and as a participant observer I can say that a sportsman is a disciplined man and he has learned effective methods of dealing with other individuals, with himself and with the society at large. However, the development of such qualities depends on whether an individual has truly developed sportsmanship. I would suggest that a student for achieving utmost success in life must maintain a proper balance between the curricular and extra-curricular activities, otherwise there might be a lopsided development of his personality and he may not taste the real flavour of a successful life with vigour, enthusiasm, meaning, purpose and satisfaction. They will develop a feeling that their raw materials have not been utilized and they have been, deprived of exposures which could have provided opportunities for their proper utilization.

Indian Agriculture — From Subsistence Farming to Profit Earning Vocation

Prof. Suresh C. Modgal, Former Vice-Chancellor, G.B. Pant University of Agriculture & Technology and Director General, Uttar Pradesh Council of Agricultural Research, Lucknow, delivered the convocation address at the Tenth Convocation of the Institute of Agricultural Sciences as a part of Eightieth Convocation of the Banaras Hindu University. He said, "Indian agriculture has changed significantly during the second half of 20th century and after a lull, the shift is gathering momentum in preparing the farm sector for its entry not only into the 21st century but also into the 3rd millennium A.D. as a modern and strong sector with an unambiguous identity in international arena. Farming which in India was taken as a means to provide food and fuel to the family, suddenly turned into a profit earning entity as a result of "Green Revolution" in mid 60s of the 20th century..... From mere subsistence or food providing means to profit earning vocation, farm sector in India now is poised to turn into a dynamic commercial player ready to play its role in global playground. Excerpts

The most significant development took place through science and technology in 20th century in the world as a whole and in India particularly is the spectacular rise in foodgrain production during late sixties and seventies. This miracle was brought about by the use of high yielding varieties of wheat and rice and adequately supplying them with chemical fertilizers and irrigation water combined with the plant protection practices. This achievement is popularly known as *Green Revolution.* There has been a four fold increase in foodgrain production in the country since independence against a less than three fold rise in human population todate.

India with a total population of nearly 970 million people is striving hard to produce enough food just sufficient for the present population. It will need around 225 to 240 million tonne of foodgrains by the turn of the century to feed more than one billion of population in contrast to the present production of 198.7 million tonne annually.

Human population, food security, and food production are closely related with each other. Population growth rate in developing countries like India is much higher than the developed countries. Human population in India has been increasing at an alarming rate of 2.2 per cent annually Only of late it has started sliding down and is now at present 1.8 per cent Food production in the country is increasing at a rate higher than 3 per cent, exceeding that of human population.

After a sluggish growth in agriculture sector (3.6 per cent for 8th Five Year Plan), it now just is beginning to rise, and as a result of several paradigm shifts, a national target of 4.5 per cent has been set for the 9th Five Year Plan. Due to several significant developments in the second half of 20th century, agricultural scenario at global and national levels is poised for a Mega Shift. Since you are going to be the moving force behind these developments, I feel it my duty and privilege to recount some of the major CHALLENGES and OPPORTUNITIES that you shall be negotiating here on.

CHALLENGES

Food Security and Population

Provision of enough food for surging human population in India (1 billion by 2000 AD) is the basic requirement to be met. The country as of today is producing around 200 million tonne of foodgrains annually which comes to about 200 kg per person per annum. This falls short by 50 to 100 kg per person to ensure his food security all the year round. For every Chinese there is 300 kg of foodgrain available per annum. India therefore, will need to produce at least 250 million tonne of foodgrains by turn of this century to ensure enough food for every month. But even as this target is difficult to be achieved, full food security at individual level shall be a far cry which can only be ensured after raising the purchasing power of every person to buy enough food for him and his family ensuring its quality and nutritional standards. Another important consideration in this regard is the accessibility of enough food to food deficit areas like Kalahandi in Orissa or any other region where due to nature's vagaries or any other reason, food shortages are being experienced. This will amount to the removal of not only the absolute hunger but also the elimination of nutritional and endemic hunger from the face of our nation. This is a challenge that your generation will have to meet. Equally important is to put an immediate restrain on the ever swelling human population in our country. It has already exceeded 970 million mark and is likely to cross 1 billion mark by 2000 AD. If goes unchecked, it may touch 2 billion mark by AD 2050. Hence to ensure a secured food security in this country, immediate brakes on population expansion are essential.

Global population is around 5.5 billion at present which by turn of the century is likely to swell to 6 billion in number. Increasing at the present pace, world population may well cross the 9 billion mark by the year 2020 which would be difficult to sustain from the food supply point of view. But if the present trends of declining growth rate in population continue, this number could remain limited to 8 billion. According to a pessimistic estimate, the world population may stabilize around a staggering figure of 25 billion. But the optimistic view is that it may stabilize somewhere near 12 billion, matching well with the world food supply.

Natural Resource Management

Soil is foremost among natural resources, others being water, atmosphere, forests, and vegetation or bio-diversity. Entire plant and animal life is dependent on soil and the sustainable soil productivity depends upon how we behave with soil. History is witness that rise and fall of civilizations has been a function of the manner in which soil was treated during that period, and a good fertile soil always nurtured and sustained life of all kinds. In the haste of increasing production, in search of new habitat, and in the name of development of different kinds, man has been exploiting soil through ages, and in the process has been destroying the very basis of life including his own. Some of the farmers in high productivity areas have tempted to dump the chemical inputs indiscriminately in the form of chemical fertilizers and poisonous pesticides in hope of getting more from soil and in process polluting and degrading it. This needs to be corrected. Take care of soil during your own life time and it will ensure your safety and that of your posterity.

Water is another very important and most scarce life suporting natural resource. Sustainability of agricultural production and future food security depends up to a large extent upon the efficient management and economic use of water. Indiscreet use of irrigation water not only is resulting in a declining water table, but is also affecting adversely the growth, yield, and quality of crops beside increasing the cost of production and lowering the net profits. Water resources in the country are vanishing fast due to gross neglect of natural watersheds, denundation of forests in hills and plains, mismanagement of rain water, irrational use of canal water, and excessive mining of ground water. Water table in Punjab, Haryana, and Western Uttar Pradesh is fast receding at the rate of 20 to 50 cm annually. Decline in water table is also affecting the quality of irrigation water. Water at lower depths in Punjab and Haryana is more sodic. The other consequence related to this problem is higher cost of production. Decline in water table reduces discharge and thus brings a decline in the command area of tubewells and increase in the cost of irrigation. This also will influence the water purchasing power of less resource farmers. The best way, therefore, is integrated and rational water use through a proper watershed management and conjunctive use of water. Use of drip and sprinkler irrigation is also getting popular since these methods help save substantial volumes of water and do the job with increased efficiency. Further, indiscreet use of soil amendments, application of chemical pesticides, and to a certain extent the use of chemical fertilizers pollutes water and renders it unfit for use by human beings, animals, acqua life, and plants as well. Public awareness on this aspect needs to be created.

Atmosphere through its gaseous composition influences the entire ecosystem and plant and animal life on this planet. Recent indications about Global Warming due to accumulation of green house gases in atmosphere are becoming evident. Concentration of methane in atmosphere is said to be increasing at the rate of 1 per cent annually. Lowland flooded rice is supposed to be an important source releasing Methane and Nitrous Oxide gases into the atmosphere. To find out as to how much is the exact role of flooded rice in polluting atmosphere is not only of scientific value, but more than that of socio-political importance. Similarly, increase in the concentration of Carbon dioxide and a decline in the proportion of Oxygen in atmosphere is also evident. There is an urgent need to change the life styles in order not only to clean the atmosphere, but to reduce the pollution of all types from the micro and mega ecosystems. There cannot be a better change agent than you young agricultural graduates of today.

Earth's Green Cover is dwindling fast from its surface leaving it bare and naked and rendering it an unsuitable habitat for life of all kinds. Forest cover in India is left to be 22.4 per cent of the total geographical area (329 million ha). Agriculture is the predominant land use in India (147 million ha), followed by forest (75 million ha). About 158 million ha are degraded lands.

Forest statistics of Uttar Pradesh is startling. A total land area of 51,663 sq. km is said to be under forest cover (1994-95) in the state. Out of this 34,247 sq. km is in Himalayan region, 6,556 sq. km in Terai region, 3,304 sq. km in the Ganga Indus plains, and 7,556 sq. km in Vindhyan region. Though as per the national policy 33.3 per cent land area should be covered under forests, in Uttar Pradesh only 17.7

per cent area is under forest cover. But according to the satellite images the forests cover only 11.42 per cent of the state's area. Hence the forest cover scenario is dismal in this state as well as at the national level. This large gap between the desirable and actual, needs to be narrowed down. Forests provide a physiological mechanism to purify the polluted air and release oxygen essential for animal and plant life. Forests play an important role in the process of rainfall and conserving soil and water in it which is recycled for sustaining life. We have to decide not tomorrow but today whether we would like to sacrifice our precious forest wealth in the name of so-called development process or conserve it for saving our own generation and leave a better world to live for future generations.

Biodiversity conservation in the above context as an important life supporting component is essential for agricultural sustainability, and food security will remain a myth till the conservation, multiplication, and rehabilitation of biodiversity are ensured. While destroying the forest wealth for satisfying the human lust, the treasure of biodiversity comprising thousands of plants, animals, and microflora and fauna has been lost beyond retrieval. Issue is to conserve and multiply of what is left and to create a favourable environment for a new resurgence. India, because of its variability in ecoclimate and edaphic conditions that vary from arid to humid, from tropical to alpine, and from sea coasts to cold deserts in Himalayas, is a vast and one of the most important repositories of biodiversity. This huge store of biodiversity is facing threat and 15 to 20 per cent of the entire vascular flora (over 25,000 species) may be classified under one or the other category of threatened species in our country. Among these, a high rate of deforestation presents one of the greatest threats. This will have to be stopped to keep the life going in this country and else-where.

Knowledge Dynamics

From 'learning to know' through 'learning to do' and 'learning to be', the next millennium will belong to 'learning to live' (quoted from *Education India : The Next Millennium*, World Conference). Education in today's World and more true for the World of 21st century has become a means of living, a source of survival for the mankind. Strange is the World of today. Not the nuclear weapons, but the front-line technology generated through "The Cutting Edge Research" has become the most powerful weapon and most precious wealth which gauges the strength of a nation. A nations accomplishments could well be judged by the standards and the degree of excellence that its universities and research institutions have achieved. At least some of the developing countries like India, China, Korea, Taiwan, and few others in Asia and elsewhere are trying to compete with some of the top ranking countries in the World to push forward the frontiers of knowledge and creating more efficient technologies in order to strengthen their economies. While doing so, unless the level of scientific and technical education and equally so the place and social status of teacher in the society is raised to an appropriate level, this will be futile even to dream of it. This essentially is now or never case and an immediate serious thinking is required at all levels on this most important issue. The future educational requirements shall be highly specialized and sophisticated, and creation of nothing less than excellence in every field shall be needed.

Improved technology thus generated will have to be disseminated and taken to the actual user, may it be the farmer or the agro-industrialist. Industry is going to be an important player in rapid transformation of farmer and farming scenario of India in the first quarter of the 21st century. The huge investment that agricultural education and research will require, cannot be borne entirely by the state. Industry will have to come forward to share it since it is going to be a beneficiary. Industry as a matter of fact will be playing the role of a major participant. Graduates of today will be meeting this challenge as they shall be the human resource needed in the entire process.

OPPORTUNITIES

Never before in the history of mankind the opportunities were so vast and abundant. Some of the socio-political, socio-economic, scientific, and technological developments that took place during last few decades have opened scores of new avenues to meet the emerging challenges and achieve limitless success. In the context of agriculture, after the Green Revolution that took place during the late sixties and early seventies of 20th century, one of the most significant global changes that has influenced Indian agriculture is the collapse of the Union of Soviet Socialist Republics (USSR), its system's ethics, and philosophy. This has triggered a chain reaction and has ultimately culminated into the New World Order and a new understanding among the nations. This New World Order is still highly dynamic and unstable, and hence non-definable. Yet some of its features have started crystallizing and can, therefore, be briefly explained here.

Globalization, Libralization, and Multinationalization are the key words in this process. This all has started with a big bang as most countries in the world are preparing to open their markets, globalizing their economies, removing restrictions on import-export, expanding their business operations internationally, bidding good bye to protectionism of their trade, and seeking their entries into the World Markets on free competition basis in a market driven economy system. All these economic processes have resulted in a new General Agreement on Trade and Tariffs (GATT) and have ultimately come out with the formation of Workd Trade Organization (WTO) which deals with agriculture as well as industry. India is a founder member of these agreements and organizations. With this new window focusing on Indian agriculture, it is bound to leap forward nationally and globally. It will not only open new economic vistas, but will generate new opportunities for on farm and off-farm employment for the young men and women and enable them to lead a better quality of life. But one will have to use caution in dealing with these new setups and avoid hurry.

Information Technology explosion during the last two decades and establishment of vast cyber space network cutting across the developed and developing nations is going to create impact of an unknown magnitude the world has never even imagined before. This development will not only speed up the process of internationalization of agriculture and its trade, but hasten the process of agricultural development, modernize the entire gamut of rural sector activities, help create enormous job opportunities, and increase the quality of life. Human resource development will become easy, and education and training will bear a modern look.

The technology innovations made in informatics and communications have opened a wide range of opportunities for transfer of technology in agriculture, removal of illiteracy, upgradation of skills, and alleviation of poverty from rural areas. The formation of databases and spread of computer networks along with access to facilities like NICNET and INTERNET, and other "Information Super Highways" through satellite technology including imagery techniques for land use planning shall facilitate the entry of rural India into the 21st century avoiding any oddity. A mix of Super Computer with satellite network will provide weather forecasting for farmers. Doordarshan along with its 900 transmitters and local T.V. cable networking not only manages to reach almost the entire Indian population, but also connects them with the world outside India. With these improved technology tools makıng inroads even into the remote corners of the country and the telecommunication facilities going high tech, the communication facilities in villages will be as good as in cities.

Paradigm Shift in Agriculture is apparent and its impact on economy is becoming evident at least in higher productıvity zones of Punjab, Haryana, Western Uttar Pradesh, and U.P. Terai. With the basic demand for food being met with a spurt in its production as a result of "Green Revolution", the Indian agriculture has started shifting from mere subsistence farming to a means of profit earning and better living. Though rice-wheat system and its productivity are important for the nation's food security, it is a high consumer of energy and inputs, and has become less remunerative to farmers. This system has to be made more productive and competitive through low cost technology. Farmers are shifting to more remunerative agricultural alternatives like cultivation of oilseeds, vegetables, fruit crops, spices, flowers, mushrooms, sericulture, seed production, dairying, poultry, and fish production. The state of Uttar Pradesh is to launch a Rupees 800 crore (approximately) project soon with the assistance of World Bank to diversify its agriculture in order to generate on-farm and off-farm employment, alleviate poverty, and increase the income in rural sector, particularly of small, marginal, and resource poor farmers. In order to make these developments sustainable and competitive including the productivity of foodgrain crops, advanced technology of integrated crop management, hybrid technology, and the new biotechnological tools are being deployed.

Agro-Food Processing and Value Addition have a direct bearing on Rural Poverty. India, though being the second largest producer of fruits (second to Brazil) and vegetables (second to China) producing 11 per cent of fruits and 8 per cent of vegetables at Global level, is processing less than 1 per cent of its fresh produce. Similar situation is with regard to dairy and poultry product. Out of 20 billion eggs and 170 billion broilers annually, only 1 per cent of the marketed meat is chilled. The fisheries situation is not much different. However, the fact remains that India has the potential to be number one in the world in food production.

Food is vital for India's economy. There may be only few countries in the world that have so much to lose as India if this country does not score on agricultural front. Agriculture sector employs about 64 per cent of the lobour force and contributes nearly 27.4 per cent of Gross Domestic Product (GDP). This is true that nearly 74.3 per cent (1991 census) of the total population lives in rural India and about 64 per cent are directly employed in agriculture, but what is not realized properly is that most of the unemployed belong to rural sector. A majority of these unemployed are youth. Hence, a large proportion of those who fall below poverty line, live in rural India. Rural women who form one-third of the agricultural labour in the country are worst hit with regard to their gainful employment.

There remains a large opportunity for increasing the scope and size of food processing industry in India to process at least 30 per cent of the produce. This certainly will need pooling of resources and capital investment with best of the managerial skills and efficiency of world standard. Steps are afoot to link agriculture with industry in a partnership mode and the entry of corporate sector into these new green pastures is imminent. Viewing the nation's massive agricultural potential, present status, and highly skilled human resource, there should not be any doubt for an unprecedented Agri Business development early in the 21st century. This of course will need substantial monetary as well intellectual investments. Agricultural institutions of higher learning will have to turnout graduates in respective scientific and technical disciplines and so also in the discipline of Agribusiness Management who can match with the best in the World. If the country can achieve this mark, it will surely be successful in generating employment, alleviating poverty, supply better quality of food to all, earning foreign exchange through export of finished products rather than raw materials, and multiply wealth. For making this aspect effective, Intellectual Property Right (IPR) laws and Patent laws will have to be reviewed and redefined.

Agricultural Exports of the country are on rise with an increase in the agricultural GDP. The total agricultural exports from India during 1993-94 were worth 3.04 billion US$ and during 1994-95 were for US$ 3.15 billion. However, the share of agricultural exports in the total exports of the country is on decline. As a country advances on the path of growth, its agriculture sector is taken over by the industrial sector. This has happened in the United States of America, Europe, and elsewhere. It necessarily does not mean a decline in the agriculture sector, particularly, as long as the total agricultural product continues to grow further as the case in India is. Presently, most of these exports are of raw produce with the value added products contributing only a small fraction of the total agricultural exports. This scenario, however, is bound to change fast as the capital investment in private sector increases in domestic food and allied industry. These trends, fortunately, are already visible.

Concluding

Indian agriculture has changed significantly during the second half of 20th century and after a lull, the shift is gathering momentum in preparing the farm sector for its entry not only into the 21st century but also into the 3rd millennium A.D. as a modern and strong sector with an unambiguous identity in international arena. Farming which in India was taken as a means to provide food and fuel to the family, suddenly turned into a profit earning entity as a result of "Green Revolution" in mid 60s of the 20th century. Its rate of growth accelerated and then of late showed the signs of fatigue. Now only recently a new spurt in food production in the country has been noticed and with it a change in the perception and shape of agriculture is becoming visible. From mere subsistence or food providing means to profit earning vocation, farm sector in India now is poised to turn into a dynamic commercial player ready to play its role in global playground. These developments while present formidable challenges to the young men and women, also offer enormous opportunities to them to make their lives purposeful and to transform their motherland India into a powerful and financially viable nation to reckon with globally with a total elimination of poverty and hunger from its face.

Various Study Related International Olympics

Students studying in Standard 11 or **below** are advised to write to ***Prof. S. Chattopadhyay, 18 A Shanti Vihar, Sonari Jamshedpur-831 011*** alongwith self addressed stamped envelope (Rs. 6/-, 12 x 29 cm) and loose stamp of Rs. 6/- (extra) for information towards various International Study Related Olympics such as **Physics, Mathematics, Chemistry, Robotics, Astronomy, Biology etc.** Study/preparation material for some of these are also available

DU Signs MoU with CSIR, DRDO

The University of Delhi is reported to have signed a Memorandum of Understanding (MoU) with the Council of Scientific and Industrial Research (CSIR) and the Defence Research Development Organisation (DRDO) to promote academic interactions for the development of knowledge in the field of Biomedical Sciences.

Speaking on the occasion, the West Bengal Governor, Mr. A.R. Kidwai, commended the initiatives taken by the Delhi University to show a way to other universities for establishing closer links between CSIR labs, DRDO and Delhi University.

He admitted that all expertise cannot reside in any lab or University and this necessitates cooperation between universities, industries and National R&D labs to train the new generation of scientists in the area of applied research such as biomedical science, genetics molecular biology, biotechnology and several other new and emerging areas of science.

He recalled his association with CSIR in 1948-49 and appealed to Dr. R.A. Mashelkar, to provide all kind of help to Dr. B.R. Ambedkar Centre for Biomedical Research, the institution working for the development of new molecular and herbal drugs. The Vice-Chancellor, Delhi University, Prof. V.R. Mehta, presided over the MoU signing ceremony.

He welcomed the institutions for this unique partnership in advancement of science and creation of new knowledge in the field of Biomedical Sciences. He said that this mutual cooperation among Dr. B.R. Ambedkar Centre for Biomedical Research and Centre for Bio-chemical Technology and Institute of Nuclear Medicine and Allied Sciences would help the scientists of CBT and INMAS work as adjunct faculty of the University.

Such cooperation would also help impart high-quality academic knowledge to the students of ACBR for their pursuit of M.Sc and M.Sc-Ph.D, combined degree programme in medical science, radiation biology, radio-pharmaceutical chemistry, molecular biology and immunology.

The ACBR faculty and students will have access to the highly sophisticated and precision instruments available at CBT and INMAS. Dr. Mashelkar, Director General, CSIR announced that his organisation will give 10 Research Fellowships this year for the students and it would be enhanced to 20 next year.

International Year of the Ocean

In recognition of the importance of the ocean, the marine environment and its resources for life on earth and for sustainable development, the United Nations has declared 1998 as the International Year of the Ocean (IYO). This provides a window of opportunity for governments, organisations and individuals to become aware of the ocean situation and to consider the actions needed to undertake our common responsibility to sustain the greatest common heritage we have and without which we cannot exist.

It is known that recent global change related research the world over has established the crucial role oceans play supporting the life and climate systems on Earth. Hence, in order to focus and reinforce the attention of the public, the governments and decision-makers as a whole, the year 1998 is being celebrated as the International Year of the Ocean.

The Department of Ocean Development is the nodal Department for the Intergovernmental Oceanographic Commission (IOC) activities in India and is concerned with the celebration of the IYO. The following activities are proposed for the the celebration of the International Year of the Ocean :

I. National Events

Intergovernmental Oceanographic Commission (IOC) has prepared a text for the Ocean Charter for adoption of all the member states of IOC. The proposed Charter is a statement of principle and not a legally binding document. It is a declaration of intent, of belief for and commitment to the future of the ocean and marine and coastal environment. The aim of the Charter is to combine political and public commitment as a powerful means of creating awareness. It is expected that this Ocean Charter would be signed by the heads of the State of the member countries. In India, Department of Ocean Development is proposing to organise a public function for signing of the Charter by the President of India. Records of the signatories, dates and events where signed will be kept by Canada for publication after 1998. In order to bring awareness in the maritime states, similar public functions are proposed to be organised for the signing of the Charters by Governors.

IOC has also designed a Charter for signing by individuals in the member countries. Department is planning to approach Universities, national laboratories, research agencies, NGOs etc for getting the individual versions signed by the scientists and general public.

A set of commemorative philatelic stamps is planned to be released on the theme prescribed by IOC. The theme will be chosen from 'Ocean and Climate', 'Ocean and food', 'Ocean and pollution', 'Ocean and youth', 'Ocean and technology', 'Ocean and wildlife', 'Ocean and Archaeology' etc.

A special supplement in major newspapers would be brought out on 15th August, 1998, highlighting the role of ocean as a common heritage of mankind and its importance in shaping the quality of life.

Special Lectures are proposed to be arranged by eminent Oceanographers. All India Radio and Doordarshan will be organising popular informative talks/discussions and other programmes on the occasion.

II. International Events

Department of Ocean Development will participate in the Lisbon Expo '98, the main theme of which is 'The Oceans : A heritage for the future'. The participation will highlight the achievements in Antarctic Research, Polymetallic Nodules Programme, Coastal Ocean Monitoring and Prediction System (COMAPS), Ocean Observation and Information Services (OOIS), etc in the form of procreation of Maibi-Indian permanent station at Antarctica.

As part of the Indian involvement in the International Year of the Ocean, ORV Sagarkanya will be deployed for the INDOEX programme in which India, Germany, France, Netherlands and Sweden are participating. The objective is to study the aerosol characteristics and their optical effects over the oceanic regions. The programme is intended to be carried out in three phases comprising INDOEX pre-compaigns, a field phase and a final phase.

Launching of Ocean Satellite in the year 1998 would be dedicated to the International Year of the Ocean. A workshop on Ocean Satellite is also proposed to be organised. An International workshop/seminar is also proposed to be organised at Antarctica Study Centre, Goa.

It is also proposed to hold meetings of the Convention on Conservation of Antarctic Marine Living Resources (CCMLR), Council of Managers of National Antarctic Programmes (COMNAP) to commemorate the International Year of the Ocean.

The national laboratories and the Universiteis are also exhorted to celebrate the International Year of the Ocean by organising painting and quiz competitions on the theme relevant to the 'Ocean'.

As a mark of their interest in preservation and protection of the Ocean, the following 'My Ocean Charter' should be signed by the heads of institutions on behalf of staff and students.

My Ocean Charter

"I agree :

- The oceans and the creatures therein are a necessary part of life on this planet.
- Maintaining the health of the oceans and the abundance of its fisheries, together with the wise and safe uses of all its resources, must be accepted and honoured by governments so that future generations can enjoy the continuing benefit for all peoples.
- Understanding the marine environment and its living community, is necessary for the stewardship of the oceans and the seas and for the making of decisions to protect and husband its resources.
- We must work together to succeed — within countries people can influence ocean policies if they act together — internationally, countries should help their neighbours and accept regional policies and actions — countries having the knowledge and resources should assist less fortunate nations — data and information on the ocean should be readily available — international and intergovernmental organizations should be used to generate global programmes and agreements.

I promise to remember my ocean charter, in my treatment of the oceans and the water that flow into the ocean, in my work and in my play and in the decisions that I make. Signed in 1998 International Year of the Ocean".

Maharashtra Medical Varsity

The Maharashtra University of Medical Sciences, set up with a view to bring in uniformity in medical education, was inaugurated by State Governor Dr. P.C. Alexander in Nashik recently. 135 colleges imparting education in Medical and allied disciplines in the state will come under the first medical university in the state.

The new university of medical sciences will decide the issues related to examinations, faculties, education system of the medical and related syllabus being taught in Maharashtra.

Speaking at an inaugural function Dr. Alexander said that the new university should become a centre of research and not an institution just to conduct examinations. He suggested that the university should conduct a research on providing the medical facilities effectively to the rural population. Special attention should be given on the training of the doctors, he added. Dr. Alexander also made it clear that the university at Nashik would be given as much autonomy as enjoyed by the other universities in the state.

The Chief Minister Mr. Manohar Joshi, in his presidential address, said that the new university should work for the benefit of the neglected classes in the state. He hoped that the university would produce committed doctors to serve the people of the state.

Public health and medical education minister Dr. Aher said that the decision to establish a separate university for medical sciences was taken to bring uniformity in the medical education in the state. He informed that branches of the university would be set up in each revenue division of the state.

Union forest and environment minister Mr. Suresh Prabhu lauded the efforts of Dr. Aher and assured of the support from the union government in conducting research in traditional therapies such as herbal care.

Programme on Economic Restructuring

The Institute of Applied Manpower Research, New Delhi proposes to organise a Training Programme on Employment and Training Implications of Economic Restructuring and Liberalisation on July 22-24, 1998.

The programme aims to (i) give an overview of economic restructuring and liberalisation in India vis-a-vis the global scenario; (ii) discuss the manpower implications of economic restructuring and liberalisation; (iii) appreciate the problem of redundancy and redeployment of manpower, (iv) evolve HRD strategies in the context of economic reforms; and (v) discuss the issues in employment planning for informal sector.

The programme is primarily meant for officers of Central and State Government Departments and Administrations of the Union Territories dealing with manpower and employment planning, development planning, training and development and programme evaluation work. They could be from the Department of Planning and Development, Industries, Rural Development, Agriculture and Allied Sector, Animal Husbandry, Education including Technical Education, Labour, Employment and Training, Transport and Communication, Tourism, Finance and Science and Technology.

Further details may be had from the Head (Trg.), Institute of Applied Manpower Research, Indraprastha Estate, (Opp. Indira Gandhi Indoor Stadium), Mahatma Gandhi Marg (Ring Road), New Delhi-110 002.

Social Awareness Cell

Mumbai University is reported to have set up a 'social awareness cell' which will spread "meaningful and useful awareness through workshops, seminars, and conferences aimed at different cross-sections of society."

The cell is expected to extend its activities beyond seminars and work to eradicate social ills. Speaking at the inauguration function Justice (retd) C.S. Dharamadhikari said that unless the status of women was elevated within the family, one could not expect her to have an equal status with men in society. Inspector-general of police Sridevi Goel spoke about the increasing number of crimes against women and stressed that socio-legal awareness would go a long way in curbing the rising number of crimes against women.

Tamil Varsity Equipped for Professional Courses

Tamil University is fully equipped for teaching professional courses like engineering and medicine in Tamil and now it is for the central government to utilise the facilities and pave the way for introducing Tamil teaching in professional courses, said Dr. K. Karunakaran, Vice-Chancellor, Tamil University. He was inaugurating the seventh seminar of the All-India Association of Scientific Tamil at the University in Thanjavur recently. He said that the university had prepared books by coining scientific words in Tamil. It had also trained teachers from Anna University in the methodology of teaching professional courses in Tamil.

Dr. K.P. Aravanan, Vice-Chancellor, Manonmaniam Sundaranar University said that scientific temper was lacking among people in Tamil Nadu. Even the best scientific inventions like computers were being used for knowing astrology. Scientific achievements were also very poor in Tamil Nadu. Any scientific research should help people and should not be against the welfare of the people.

News from UGC

Countrywide Classroom Programme

Between 1st and 7th July, 1998 the following schedule of telecast on higher education through INSAT-1D under the auspices of the University Grants Commission will be observed. The programmes are telecast on the Doordarshan's National Network from 7.15 to 8.00 a.m. every day except on Saturdays & Sundays. These programmes are also telecast on Doordarshan's National Network from 6.00 to 7.00 a.m. four days a week i.e. on Tuesdays, Thursdays, Saturdays and Sundays. On DD2 University Video Lecture Courses will be shown at midnight between 0000-0030 hrs and in the morning between 10 to 10.30 a.m. on Monday through Friday.

Hindi Programmes are being telecast on Mondays, Wednesdays & Fridays from 6.00 to 6.30 a.m.

1.7.98

"Energy Flow - 1 A Handful of Energy"
"Ayurveda Medicine"
"Fishery Resources of India — Prawn Farming-1"
"Young Scientist"
"Social Survey"
"Medical Instruments & Diagnosis-1 X-ray and Ultrasound"
UVLC
"Household Devices for Reducing Drudgery"

2.7.98

"Question Time-68"
"Telephone Manners : Personal Calls"
"Fishery Resources of India — Prawn Farming-2"
"Bio-Diversity Himalayas Untold Story-1"
"Communication or lack of it"
"Rajasthan Agriculture on Move : Foodgrains"
UVLC
"The Indian National Movement : Pre-Gandhian Phase"

3.7.98

"The Story of Print"
"Fishery Resources of India — Prawn Farming-3"
"ISO Electronic System-2"
"Coffee Break Crossword-2"
"Teaching Through Media-2"
UVLC
"Personality : Types and Traits"

4.7.98

"Sanskrit — Through the Ages Vedic-Gupta Period"
"Chess — A Game of the Mind"
"Nature's Child — Adivasi"
UVLC
No Telecast

5.7.98

"Artist Against Communalism-4"
"Lasya Kala — Bharathanatayam Kuchipudi"
"My City, My Paintings"
UVLC
No Telecast

6.7.98

"Molecular Geometry-1"
"The Dimensions of Technology : A Lecture by Dr. Abdul Kalam"
"Fishery Resources on India — Seaweeds-1"
"C for Computers"
"The Rise of Bio-technology-2"
"A World of English-3 : Interviewers Interviewed"
UVLC
"Mauryan Art"

7.7.98

"Vasundhara-1 Sacred Grove"
"Solemnity in Glass"
"Fishery Resources of India-2 Sea Cucumber"
"Tribals of Chhotanagpur-5 Tribal Cosmology"
"Coffee Science-5 Physiological Manipulation for higher yield"
"Historical Excavation"
UVLC
"Family as a Social Institution"

Hindi Telecast

प्रात: 6.00 से 6.30 बजे तक

1.7.98

"वामन वृक्ष–2"

2.7.98

"बाजरा"

3.7.98

"बेसिक्स ऑफ डेयरी फार्मिंग"

6.7.98

"युवा उत्सव"
"लास्यकला : मोहिनी अट्टम"

7.7.98

"कुचमनी ख्याल : एक कला"
"लोकशिल्प"

Promoting Indian Thinkers

The University Grants Commission (UGC) is reported to have chalked out a plan to promote the philosophy and works of Gautam Buddha, Mahatama Gandhi, Pandit Nehru and Bhim Rao Ambedkar.

In its ninth plan period schemes, the UGC plans to extend financial assistance to unversities for pursuing studies relating to Indian thinkers.

According to the UGC, "There is a great need to acquaint teachers and students with their (these thinkers) thinking and work and to involve them in studies, research and field work based on extension service programmes of constructive work." Universities can also set up centres for comparative studies.

The UGC will extend financial assistance to universities after selecting the applications. The commission will examine work of the department in the respective area. Proposals with innovative ideas will be given weightage. Even colleges with a significant contribution in the field will be considered for financial help.

The one-time financial help will be around Rs. 2 lakh for providing books and journals and equipment like computers and audio-visual aids. The recurring annual help will be around Rs. 2.5 lakh and will include expenditure on honorarium, stipends, visiting faculty, seminars, workshops and programme cost. Programme cost will include field action, preparation of research proposals and TA/DA.

Universities can conduct full time or part time courses of three to six months for groups of teachers/students, NGOs, corporate executives and Government officers.

Universities can also organise seminars and lectures on some identified topics. And these can be later on put in printed form in the library for use of others. Researches and studies in the thoughts and programmes of these thinkers can also be undertaken.

A university only has to apply to the UGC with its project proposal. The Commission will support an approved programme till the plan period lasts. But infrastructure, like building and supporting staff, has to be provided by the university. Also, any recurring liability after the ninth plan period has to be borne by the university.

The centre will have an advisory committee with the Vice-Chancellor along with two to three professors nominated by the Vice-Chancellor and two to three outside experts. The advisory committee will meet once a year to review the work, accounts and the report of the centre.

AIU News

GNDU Bags Inter-Varsity Trophies

The Guru Nanak Dev University has won the (a) Dr. B.L. Gupta Inter University General Championship Trophy; (b) Osmania University Platinum Jubilee Trophy for Women; and (c) Kridamaharshi Shri Meghnath Nageshkar Trophy for Men for the year 1996-97. Panjab University won the second position while the third position has been claimed by University of Delhi.

Dr. B.L. Gupta Inter University General Championship Trophy was donated by Sh. S.K. Gupta, son of veteran sports administrator, Shri B.K. Gupta in 1982. This trophy is awarded as a mark of excellence to a University securing highest points exclusively in Inter-University Tournaments. The computation of marks is done strictly in accordance with relevant clause (Category-C Tournaments) of the revised criteria for the award of MAKA Trophy approved by the Dept. of Youth Affairs & Sports. This is a rolling/running trophy.

The Inter University Sports Board at its annual meeting held on June 30, 1995 at Shivaji University, Kolhapur accepted the offer made by the Osmania University and the Shivaji University for the donation of trophies titled 'Osmania University Platinum Jubilee Trophy' for Inter University General Championship for Women and 'Kridamaharshi Shri Meghnath Nageshkar Trophy' for Inter University General Championship for Men. These are running trophies and the criteria for the award of these trophies is the same as being followed for Dr. B.L. Gupta Inter University General Championship trophy.

All these trophies will be presented to the winner(s) at the next annual meeting of the Inter-University Sports Board of India proposed to be held at the Devi Ahilya Vishwavidyalaya, Indore.

News from AICTE

Norms and Standards for Technical Education

One of the functions of the All India Council for Technical Education (AICTE) as provided under Clause 10(u) of the Act, is to lay down Norms and Standards for courses, curricula, physical and instructional facilities, staff pattern, staff qualifications, quality assessment and examination. AICTE is, therefore, required to prescribe norms and standards for technical education in various disciplines under its purview.

In the year 1990, AICTE had prescribed the Norms and Standards in the fieldof Engineering and Technology, and Management. In October 1994, AICTE had taken up the task of reviewing the norms in these disciplines and laying down norms and standards in other areas where no such norms and standards were available earlier.

The norms and standards for degree and diploma programmes in engineering and technology and postgraduate programmes of management and computer applications have been published by the Council in comprehensive book form for use by the institutions and the proposers of new technical institutes. The Norms and Standards have been classified into two components; (i) Academic, and (ii) Infrastructure (Building and Space). The norms for buildings and space have been sub-divided under four different heads; (i) Administrative Area (ii) Academic Area, (iii) Residential Area, and (iv) Amenities Area. The total space required for the buildings has been worked out for small and metropolitan cities. Academic component of norms and standards include curricular requirements and faculty.

News from Abroad

Short Course on Intellectual Property

The Technology Marketing Group & ANUTECH Development International, ANUTECH Pty Ltd. proposes to organise a short course on Intellectual Property — Technology Marketing & Commercialisation on 19-30 October, 1998 at Canberra, Australia.

The course aims to upgrade the knowledge and skills of researchers, managers, government officials and technology transfer professionals by providing a range of issues, techniques and practical skills relevant to the technology commercialisation process.

These include : techniques for evaluating and assessing the commercial potential of new technologies, designs, processes or inventions; issues relating to the ownership of intellectual property and strategies for intellectual property protection; critical examination of various types of intellectual property agreements and their importance; development and importance of business plans; ways to identify, approach and follow-up company contacts; and key issues involved in ongoing project management of R&D and licence agreements, consultancies, together with management of a patent portfolio.

The course is divided into six main modules : Technology Transfer; Intellectual Property Protection; Evaluation of Technology; Marketing; Intellectual Property Agreements; and Commercialisation Strategies and Project Management.

Each of the modules can be adapted in length and emphasis according to the interests and needs of participants.

The topics proposed to be covered include (i) evaluating inventions — technical and commercial criteria; (ii) intellectual property ownership; (iii) developing intellectual property policies; (iv) patents, trademarks, copyright, confidentiality; (v) technology marketing material; (vi) methods of approaching potential partners; (vii) intellectual property negotiations; (viii) licence agreements — legal and commercial aspects; (ix) research and development agreements; (x) management of intellectual property, R&D and licences; and (xi) evaluating success in commercialisation.

The course is intended for university/institute researchers; university business management & marketers; business development professionals; research administrators & managers; research policy advisers; government officials; and intellectual property lawyers.

ANUTECH is an independent commercial agent of the Australian National University (ANU) and is one of the largest tertiary institution commercial companies in Australia. ANUTECH's Technology Marketing Group acts as a technology broker between the University and industry, facilitates technology transfer and the commercialisation of research results and manages the University's patent portfolio.

Further details may be obtained from the Course Coordinator, ANUTECH Development International, ANUTECH Pty Ltd, GPO Box 4, Canberra ACT 2601 Australia.

BOOK REVIEW

Comprehensive & Authentic

P.S.G. Kumar*

M.P. Satija and (Late) John P. Comaromi. Exercises in the 21st Edition of the Dewey Decimal Classification. New Delhi, Sterling, 1998. Pp. 148. Rs. 200/-. ISBN : 81 207 1980 8.

This book was originally published in 1990 based on 20th edition of DDC. The present edition is an enlarged and revised one based on 21st edition.

The second author (Late) John P. Comaromi was serving as Editor of DDC and much of the revision of 21st edition was done under his guidance at the Library of Congress, Washington D.C. His association with this work brought authenticity and approval of its structure and contents by the guardian of the scheme. However the presentation, particularly the examples (most of which are Indian, that too Punjabi) indicates the lion's share of M.P. Satija in its composition.

The book starts with a preface written by Satija, wherein he has discussed the genesis, growth, significance and special features of the edition 21. The author at the end of the 'preface' states that "This book is based on the 21st edition of the DDC. But it is hoped that students using the DDC-20 will find no difficulty in using the book, as there is no great difference between the two editions, except in some newly revised classes". This indicates that contentswise there is no much significant variation from its original edition (1990) and its 1994 revision.

The following chapter deals with the special features of the new 21st edition. The author explains the editorial work done on ESS (Editorial Support System, a UNIX-based system developed by Inforonix Inc) annual bulletin of the DDC on the Internet, the home page located on WWW; CD-ROM format 'Dewey for Windows', etc. The 4 volumed edition-21 has 4126 pages and has been organised in 9 sections namely : A Prefatory texts and new features; B-Introduction to DDC; C-Glossary; D-Index to Introduction and Glossary; E-Seven Tables; F-Equivalance Table for new and old numbers; G-Schedules (Vols. 2 & 3); H-Relative Index; and I-Manual. The Manual in this edition was fairly expanded. The other special features of the Edition-21 according to the author are revision in Religion, Public Administration, Law, Military Science, Social Problems, Languages, Animal Husbandry, Theatre, Literature, etc; Uninverted i.e. Direct headings; Broad based revision; Reduction of Western bias; and special attention to user convenience.

The chapter 1 explains the layout of the four volumes and elaborates the features like Definition and General Aspects Notes; Inclusion Notes; Class-here Notes; Class Elsewhere Notes; Relocation Notes; Centered Headings; Instructions specific to a Number; Add Instructions; Dot and spaces, etc.

The second and third chapters explain the procedure involved in building class numbers. The Third, chapter specifically explains 'Add Instructions' and as to how to synthesise the class numbers.

Under Chapter 4, 'Order of Preference' or citation order of facets in a multi-faceted class number is explained in detail.

Chapters 5 to 11 are devoted to explain the various Auxiliary Tables and number building rules specific to each Table.

Chapter 12 deals with 'Multiple Synthesis'; Chapter 13 with General Statistics, Law, Geography and History having organic relation with 'Areas' Table and Chapter 14 gives more illustrative examples for number building.

Chapter 15 is used for explaining the use of Relative Index.

Thus this books is comprehensive, authentic, illustrative and well presented. All the features of the scheme; devices used; special characteristics of each volume, chapter and the index are well explained and illustrated.

The prohibitive price of the original edition (DDC-21) itself limited the use of DDC particularly in developing countries ($ 500). Very few library schools have switched over to the new edition. In this background the extent of use of this present work of Satija and Comaromi appears to be limited. Some of the practising librarians may use this book to know the changes and harmoniously blend the features of the new edition with that of the edition in hand. The work will definitely be handy to students as well as practising librarians.

A paper-back edition will help in its wider circulation.

University Librarian,
Nagpur University Library,
Nagpur-440 010 (M.S.)

THESES OF THE MONTH

A list of doctoral theses accepted by Indian Universities

SOCIAL SCIENCES

Anthropology

1. Dutta, Mohendra Nath. **A comparative study of growth pattern in the early childhood among the children of two ethnic groups of Dibrugarh, Assam.** (Prof F Ahmed Das). Department of Anthropology, Dibrugarh University, Dibrugarh.

Commerce

1. Borgohain Rajkonwar, Ajanta. **A study of development of rural entrepreneurship with reference to the Dibrugarh District of Assam.** (Prof A R M Rehman). Department of Commerce, Dibrugarh University, Dibrugarh.

2. Kamble, Subhash Krishna. **Evaluation of the Maharashtra State Cooperative Housing Finance Corporation.** (Dr P S Rao). Department of Commerce, Shivaji University, Kolhapur.

3. Karve, Sunil Ramchandra. **A study of the management problems related to road transport system of the Greater Bombay.** (Dr N R Thorat). Department of Commerce, Shivaji University, Kolhapur.

4. Nayak, Nitin Damodar. **Plight of restaurant employees : A socio economic exposition with special reference to migrated labour working in restaurants in Sangli City.** (Dr V V Upadye). Department of Commerce, Shivaji University, Kolhapur.

5 Rautrao, R L. **Performance analysis of scheduled urban cooperative banks in Maharashtra State.** (Dr J G Sawarkar). Department of Commerce, Swami Ramanand Teerth Marathwada University, Nanded.

6. Santhana, Gopalan M. **An analytical study of growth perspectives in the Indian money market.** (Dr G Kotrappa). Department of Commerce, University of Mysore, Mysore

7. Shitole, Ganpatrao Yashwant. **Performance evaluation of Maharashtra Industrial Development Corporation.** (Dr R D Biradar). Department of Commerce, Shivaji University, Kolhapur.

8. Shukla, Rajendra Kumar. **Gram Panchayaton ka arthik evam vittiya anusheelan : Madhya Pradesh ke Bilaspur Jile ke vishesh sandarbh mein.** (Dr L M Malviya). Department of Commerce, Guru Ghasidas University, Bilaspur.

9 Singh, Gobardhan Prasad. **Changes in working and living conditions of colliery workers since nationalisation, 1971 : A case study of Jharia Coal Field.** (Dr L K Choudhury). Department of Commerce, Vinoba Bhave University, Hazaribagh.

Economics

1. Chaware, Suryabhan Keshaorao. **An analytical study of commercial banks lendings, recovery and impact on standard of living of people in rural area.** (Dr P A Deshpande). Department of Economics, Nagpur University, Nagpur

2. Gosavi, Madhukar Narayan. **Study of the socio-economic conditions of hotel workers in Maharashtra.** (Dr S G Bhanushali). Department of Economics, Shivaji University, Kolhapur.

3 Haque, Md Shamul. **Organisation, structure and role of industrial estates in the National Capital Region, 1955-1994.** (Dr Atiya Habeeb Kidwai). Centre for the Study of Regional Development, Jawaharlal Nehru University, New Delhi.

4. More, Dinkar Khashaba. **A comparative study of economics of factory sponsored co-operative and private lift irrigation schemes.** (Dr N K Patil). Department of Economics, Shivaji University, Kolhapur.

5. Prasad, Lokesh K. **Economic liberalisation in the Eastern Part of Germany, The former GDR and India : A comparative study.** (Prof H S Chopra). Centre for American and West European Studies, Jawaharlal Nehru University, New Delhi.

6. Purohit, Vasudha Vasant. **Sales taxation in Maharashtra State.** (Dr S D Tupe). Department of Economics, Dr Babasaheb Ambedkar Marathwada University, Aurangabad.

7. Roy Saha, Anindita. **The economics of energy conservation and industrial cogeneration of electricity : Case studies of certain selected industries in India.** (Prof Ramprasad Sengupta). Centre for Economic Studies and Planning, Jawaharlal Nehru University, New Delhi.

8 Samual, P J. **Economic development of Northern Kerala : A study at the disaggregate level.** (Dr B Alwin Prakash). Department of Economics, University of Calicut, Calicut.

Education

1. Appala Naidu, S. **A study of teacher attitudes towards the administrative behaviour of Principals in relation to the teacher morale in degree colleges of Vizianagaram and Visakhapatnam Districts in Andhra Pradesh.** (Prof R Rama). Department of Education, Andhra University, Waltair.

2. Bahera, Sukanti. **Effect of role playing model of teaching Social Sciences on the awareness of social and cultural values in high school students.** Department of Education, Kurukshetra University, Kurukshetra.

3. Iralu, Rukhono Khate. **An investigation into the problem of educational wastage and internal efficiency of the system of primary education in Nagaland.** (Dr P K Gupta). Department of Education, North Eastern Hill University, Shillong.

4 Jadhav, Mohan Lalasaheb. **Development of Education in Satara District during post independence period and its impact on rural socio economic life.** (Dr B A Kolpe). Department of Education, Shivaji University, Kolhapur.

5. Josen, Ramnik Kaur. **A study of intelligence and creativity of pre-adolescence children at different levels of physical fitness.** Department of Physical Education, Kurukshetra University, Kurukshetra.

6. Neelam. **A study of creative potential of visually impaired students in relation to their self-concept and locus of control.** Department of Education, Kurukshetra University, Kurukshetra.

7. Niranjan Reddy, M. **A study of the privatisation of school Education in Andhra Pradesh.** (Dr G Srinivasacharyulu). Department of Education, Osmania University, Hyderabad.

8. Patil, Geetanjali Sarjerao. **A critical study of scientific attitude of secondary school students from rural area and construction of a standardised scale for its measurements.** (Dr R B Dewasthalee). Department of Education, Shivaji University, Kolhapur.

9. Shanti Saroop. **Effect of physical conditioning programme on the physical fitness of the factors related to long**

distance and middle distance runners at university level. Department of Physical Education, Kurukshetra University, Kurukshetra.

Home Science

1. Santosh Kumari. **Analysis of B Sc Home Science programme of selected state agricultural universities of Northern India.** Department of Home Science Education and Extension, Panjab Agricultural University, Ludhiana.

Journalism

1. Waheeda Sultana. **The impact of health information in affecting the behavioural changes among children : An analytical study of the role of media.** (Prof N Usha Rani). Department of Journalism and Mass Communication, University of Mysore, Mysore.

Law

1. Balwan Singh. **Freedom of religion under Indian Constitution : A study of its different perspectives.** (Dr C P Sheoran), Department of Law, Maharshi Dayanand University, Rohtak.

2. Soloman Raja, L. **Victimology compensation to victims of crime in India : A socio - legal study with special reference to Pondicherry.** Department of Law, Utkal University, Bhubaneswar.

Library & Information Science

1. Thakur, Davinder Singh. **Effectiveness and use of library and information services of the laboratories of Council of Scientific and Industrial Research in India.** (Dr K G Tyagi). Department of Library and Information Science, Jiwaji University, Gwalior.

2. Vagiswari, A. **Publishing patterns of Scientists in India with special reference to Astronomers and Astrophysists.** (Prof B Vijayalakshmi). Department of Library and Information Science, Andhra University, Waltair.

3. Verma, Neerja. **Some aspects of information needs of pre-employment of public sector banks of Greater Gwalior.** (Dr Shalini Rewadikar). Department of Library and Information Science, Jiwaji University, Gwalior.

Political Science

1. Agarwala, Vidyawati. **Women and politics : A study of Indian women Parliamentarians, 1992-1996.** (Dr M Chakraborty). Department of Political Science, University of North Bengal, Raja Rammohunpur, Distt Darjeeling.

2. Ahmad, Shahnawaz. **Islam as a factor in the foreign policy of Saudi Arabia, 1964-75.** (Prof Mohammad Sadiq). Centre for West Asian and African Studies, Jawaharlal Nehru University, New Delhi.

3. Borah, Jageswar. **A study of the role of opposition in the Assam Legislative Assembly, 1972-90.** (Dr T Lahon). Department of Political Science, Dibrugarh University, Dibrugarh.

4. Capoor, S N. **National security and the concept of power in the 21st century with special reference to India.** (Dr A Narashima Rao). Department of Political Science, Osmania University, Hyderabad.

5. Choudhary, Seema Rani. **Soviet Indian relations, 1985-1991.** (Prof D Kaushik). Centre for Russian, Central Asian and East European Studies, Jawaharlal Nehru University, New Delhi.

6. Khan, Ateequr Rahman. **Space intelligence system : The role of satellites in war and peace.** (Shri M Zuberi). Centre for International Politics, Organization and Disarmament, Jawaharlal Nehru University, New Delhi.

7. Lyakat Ali. **The Western Sahara issue : Decolonisation of Greater Morocco.** (Prof K R Singh). Centre for West Asian and African Studies, Jawaharlal Nehru University, New Delhi.

8. Mohanty, Purna Chandra. **Political processes and developments in Central Asia : Reemergence of the nationalities question since 1985.** (Dr Shams-Ud-Din). Centre for Russian, Central Asian and East European Studies, Jawaharlal Nehru University, New Delhi.

9. Pande, Amba. **Nuclear free zones in South East Asia and South Pacific : A comparative study of the proposed Zones of Peace, Freedom and Neutrality, ZOPFAN and Nuclear Weapon Free Zone NWFZ.** (Dr Ganganath Jha). Centre for South Central South East Asian and South West Pacific Studies, Jawaharlal Nehru University, New Delhi.

10. Raghwendra Kishor. **Turkey and the Cyprus problem, 1974-1992.** (Prof Mohammad Sadiq), Centre for West Asian and African Studies, Jawaharlal Nehru University, New Delhi.

11. Roy Chowdhury, Rajyasri. **Changes in the political and security environment of Europe and the emerging European security perspectives, 1985-1992.** (Prof B Vivekanandan). Centre for American and West European Studies, Jawaharlal Nehru University, New Delhi.

12. Satyanarayana, D. **Caste, class and dynamics in Telangana villages : A case study of Nalgonda District.** (Dr V Krishnarao). Department of Political Science, Osmania University, Hyderabad.

13. Soru, Shelly. **Democracy in the Philippines : The Aquino Presidency.** (Prof B D Arora). Centre for South, Central, South East Asian and South West Pacific Studies, Jawaharlal Nehru University, New Delhi.

Psychology

1. Anuradha, M P. **Knowledge and attitudes about mental retardation among trained and untrained teachers.** (Dr B K Manmohan Singh). Department of Psychology, Osmania University, Hyderabad.

Social Work

1. Kokila, K. **A study on child sponsorship programme.** (Dr V Pushpa Kumari). Department of Social Work, Sri Padmavati Mahila Visvavidyalayam, Tirupati.

Sociology

1. Jovita, S R. **Catholic religious orders for women and the winds of change : An evaluation of recruitment and training.** (Dr R Indira). Department of Sociology, University of Mysore, Mysore.

2. Mani Madhav, S. **A sociological study of aids, awareness and attitudes of student youth in India and Libya.** (Dr Susan Varghese). Department of Sociology, Andhra University, Waltair.

3. Mitra, Jayanta. **A study of crime pattern in Mumbai and Montreal, Aetiology and response to crime.** (Dr Gita Shah). Department of Sociology, Tata Institute of Social Sciences, Bombay.

4. Priyadarshi, Himank. **Study of entrepreneurship development in tribal regions : A comparative analysis.** (Dr Ratna Naik). Department of Sociology, Tata Institute of Social Sciences, Bombay.

5. Roy Burman, J J. **Sacred groves among the Mahadeo Kolis and the Kunbis of the Western Ghat in Maharashtra.** (Dr Gita Shah). Department of Sociology, Tata Institute of Social Sciences, Bombay.

CURRENT DOCUMENTATION IN EDUCATION

A list of select articles culled from periodicals received in the AIU Library during May 1998.

EDUCATIONAL PHILOSOPHY

Rajput, J S. Role of the teacher in 21st century. **New Frontiers in Edn 28(1), 1998, 28-9, 3.**

Satyasundaram, I. Higher education for the 21st century. **New Frontiers in Edn 28(1), 1998, 13-27.**

EDUCATIONAL PSYCHOLOGY

Kreber, Carolin. The relationships between self-directed learning, critical thinking and psychological type and some implications for teaching in higher education. **Studies in Hr Edn 23(1), 1998, 71-86.**

Mazirow, Jack. Transformative learning : Theory to practice. **New Directions for Adult and Continuing Edn 74, 1997, 5-12.**

Pilling-Cormic, Jane. Transformative self-directed learning in practice. **New Directions for Adult and Continuing Edn 74, 1997, 69-71.**

EDUCATIONAL SOCIOLOGY

Chaudhary, K. Educational development of scheduled caste after independence : Equality or perpetuation of inequality? **New Frontiers in Edn 28(1), 1998, 40-9.**

Kumar, P S and Mehta, Anjali. The progress of education of scheduled casts and scheduled tribes in the Faculty of Medicine in the M S University of Baroda. **New Frontiers in Edn 23(1), 1998, 50-6.**

Prince, Gregory S. Are we graduating good citizen? **Ednl Record 78(3-4), 1997, 34-42**

EDUCATIONAL ADMINISTRATION

Kerr, Clark. Perspective on leadership challenges. **Change 30(1), 1998, 10-1.**

Levine, Arthur. Succeeding as leaders : Failing as a President. **Change 30(1), 1998, 43-5.**

Narayana Rao, M and Brahadeeswam, D. Assessment of quality and standards of technical education. **J of Engg Edn 10(3), 1997, 37-44.**

Newsome, Clarence G. What does a dean do? **New Directions for Hr Edn 98, 1997, 101-7.**

Palin, Philip J. The university enters a fourth dimension : International education through new technologies. **College Board Rev 180, 1997, 16-23.**

Pappas, James P and Echart, Cynthia M. Strategies for the future : Continuing higher education and economic development. **New Directions for Hr Edn 97, 1997, 96-101.**

Rajput, J S and Walia, K. An agenda for research in teacher education. **J of Hr Edn 20(1), 1997, 45-56.**

Sharp, Stephen and others. Quality assessment in higher education : The Scottish experience. **Hr Edn Q 51(4), 1997, 286-307.**

Vecchiarelli Scott, Joanna. Death by inattention : The strange fate of faculty governance. **Academe 83(6), 1997, 28-33.**

Warren, Bill. On the curious notion of academic leadership : Some philosophical considerations. **Hr Edn Rev 30(2), 1998, 50-69.**

TEACHERS & TEACHING

Bayer, Alan E and Braxton, John M. The normative structure of community college training : A marker of professionalism. **J of Hr Edn 69(2), 1998, 187-205.**

Olivas, Michael A. Prepaid tuition plans come of age : Problems and prospects. **College Board Rev 178, 1996, 2-5, 30.**

Vinck, Christopher de. Northern light : Reflections on what it means to teach. **College Board Rev 183, 1997-98, 2-7.**

EDUCATIONAL TECHNOLOGY

Herkert, Joseph R and Phillip Cartwright, G. The conscience of computer science. **Change 30(1), 1998, 61-3.**

Pavon, Julian and Hidalgo, Antonio. Telematic systems and their strategic rule in distance training. **Indian J of Open learning 7(1), 1998, 79-88.**

Shetty, Anita D and others. Developing creativity through computers. **Progress in Edn 72(4), 1997, 77-80.**

Subbayamma, G. Effectiveness of teleconferencing : A student's perspective. **New Frontiers in Edn 28(1), 1998, 57-67.**

EDUCATIONAL EVALUATION

Andrews, Grover J. Workshop evaluation : Old myths and new wisdom. **New Directions for Adult and Continuing Edn 75, 1997, 71-85**

Gray, Peter J. Viewing assessment as a innovation : Leadership and the change process **New Directions for Hr Edn 100, 1997, 5-15.**

Partington, Patricia and Brown, Geroge, Quality assessment, staff development and cultural change. **Q Assurance in Edn 6(4), 1997, 208-17.**

ECONOMICS OF EDUCATION

Manzoor Ahmed. Economics of non-formal education. **Adult Edn and Development 49, 1997, 199-205.**

Turjuman Albert C. Economics of adult education and training. **Adult Edn and Development 49, 1997, 189-98.**

ADULT EDUCATION

Hazoume, Marc-Laurent. Adult learning and the challenges of the 21st century **Adult Edn and Development 49, 1997, 29-42.**

Medel-Anonuevo, Carolyn. Learning gender justice : The challenge for adult education in the 21st century **Adult Edn and Development 49, 1997, 81-9.**

Richardson, John T E and King, Estelle. Adult students in higher education : Burden or boon? **J of Hr Edn 69(1), 1998, 65-88.**

DISTANCE EDUCATION

Passo, B K. Peer managed interactivity in distance education. **Indian J of Open Learning 6(1-2), 1997, 91-6.**

Ronan, Nessan J. Menotoring the distance learner. **Open Learning 12(3), 1997, 62-4.**

Sindhu, R S. Strategies for chemistry teaching from distance. **J of Hr Edn 20(1), 1997, 68-9.**

Suriya, M. Impact of information and communication technologies on open and distance learning : A discriminant function approach. **Indian J of Open Learning 6(1-2), 1997, 29-37.**

Takwale, Ram. Role of open and distance education in integrating education with development : Emerging model of networking collaborative learning and net-working. **Indian J of Open Learning 7(1), 1998, 1-5.**

Taylor, James C. Flexible delivery : The globalisation of life-long learning. **Indian J of Open Learning 7(1), 1998, 55-65.**

VOCATIONAL EDUCATION

Jarratt, Denise G and others. Building customer relationships : A model for vocational education and training delivery. **J of Vocational Edn & Training 49(4), 1997, 591-615.**

ACADEMIC STAFF COLLEGE
ALIGARH MUSLIM UNIVERSITY
ALIGARH

SCHEDULE

ACADEMIC STAFF ORIENTATION PROGRAMME 1998-99

CATCHMENT AREA : Agra University and its affiliated Colleges, Meerut University and its affiliated Colleges, Roorkee University, Dayalbagh Educational Institute, Agra and Aligarh Muslim University, Aligarh.

S.No.	Programme Number	Tentative Dates	Disciplines	Last date for receipt of applications
1.	LV	01.07.98 to 29.07.98	Agricultural Sciences, Biochemistry, Botany, Geology, Home Science Wild Life Science & Zoology.	
2.	LVI	03.08.98 to 30.08.98	Geography, History, Library & Information Science, Linguistics, MEL, MIL, Philosophy, Political Science, Psychology, Sociology & West Asian Studies.	
3.	LVII	26.10.98 to 21.11.98	Business Administration, Commerce, Economics, Education, Islamic Studies, Law, P.H.E. & Theology.	10.09.98
4.	LVIII	26.11.98 to 24.12.98	Chemistry, Computer Science, Mathematics, Physics & Statistics.	10.10.98
5.	LIX	04.01.99 to 04.02.99	Arabic, English, Fine Arts, Hindi, Music, Persian, Sanskrit & Urdu.	25.11.98

SUBJECT REFRESHER COURSES 1998-99

S.No.	Disciplines	Theme	Course Coordinator	Dates of the Course	Last Date for Receipt of Applications	Catchment Area
1.	Arabic	Indo-Arab Literature	Dr. M. Salahuddin Umari	26.10.98 to 21.11.98	10.09.98	All India
2.	Geography	I-Perspective on Water Resources, Environment and Agriculture in India	Prof. Abha Lakshmi Singh	01.07.98 to 29.07.98		UP, Gujarat, Goa and Maharashtra
		II-Planning for Agricultural Development in India	Prof. Ali Mohammad	26.11.98 to 24.12.98	10 10.98	
3.	History	I-Economy & Culture of Medieval India	Prof. S.P. Verma	01.07.98 to 29.07.98		UP
		II-Colonialism & India	Prof. Shireen Moosvi	04.01.99 to 04.02.99	25.11.98	
4.	Library and Information Science	I-Information Technology and Library Management	Prof. Shabahat Husain	03.09.98 to 30.09.98	18.07.98	J&K, HP, PB, UP, Raj., WB, Haryana, Bihar,

		II-New Dimensions of Academic Library Services	Mr. S. Mustafa Zaidi	04.01.99 to 04.02.99	25.11.98	NE, States and Colleges
5.	Mathematics	I-Emerging Areas in Algebra & Lie Algebra	Prof. M.A. Pathan Dr. S.M.A. Zaidi	03.08.98 to 30.08.98		All India
		II-Emerging Areas in Analysis	Prof. A.H. Siddiqui Dr. S.M. Rizvi	15.02.99 to 13.03.99	01.01.99	
6.	Persian	Modern Persian Literature	Prof. Azarmi Dukht Safavi	03.09.98 to 30.09.98	18.07.98	North & West
7.	Physics	I-Experimental Techniques	Prof. Y. Kumar Prof. R. Dayal	26 10.98 to 21.11.98	10.09.98	AMU, DEI, Agra Roorkee & Meerut Universities and Colleges
		II-Concepts in Physics	Prof. J.P. Srivastava Dr. Wasi Haider	15.02.99 to 13 03.99	01.01.99	
8.	Sociology	Research Techniques in Sociology and use of Computer	Prof. Noor Mohammad	26.11.98 to 24.12.98	10.10.98	All India
9.	Urdu	I-History and Teaching of Urdu Poetry	Prof. Qazi Afzal Hussain	03.08.98 to 30.08.98		All India
		II-History and Teaching of Urdu Prose	Dr. Mohammad Zahid	26.10.98 to 21.11.98	10.09.98	

Prof. H.A.S. Jafri
DIRECTOR

Note : While 85-90 per cent selections shall be restricted to teachers from the Catchment Area, 10-15 per cent selections shall be made on All India basis.

International Centre for Distance Education and Open Learning, Himachal Pradesh University, Summer-Hill, Shimla-5

ADMISSION THROUGH CORRESPONDENCE FOR THE SESSION 1998-99

Courses	Duration	Admission Schedule	
B A , B Com (Pass course)	Three Years (Annual system)	Without late fee With late fee of Rs. 200/- With late fee of Rs 500/-	30th Sept. 15th Oct. 98 16th Nov. 98
M.Ed	One Year (Two semesters)	Without late fee With late fee of Rs 200/- With late fee of Rs 500/-	15th Jul 98 31st Jul. 98 17th Aug. 98
PGDPM & LW	One Year (Two semesters)	Without late fee With late fee of Rs 200/- With late fee of Rs. 500/-	31st Aug. 98 15th Sept 98 30th Sept. 98
M.A in English Economics, Hindi History, Pub. Admn. Pol. Science, Skt., M.A./M Sc. Maths, M.Com.	Two Years (Four semesters)		

The handbook of information containing the admission form and details can be obtained on payment of Rs. 100/- at the counter or by Regd. post by remitting Rs. 120/- through crossed IPO's/Bank Draft drawn in favour of the Director, ICDEOL, H.P University, Shimla-5 from 20th June 1998 Price of the handbook for the students residing abroad is US$ 10 payable by crossed demand draft. Prospectus will also be available from 20th June 1998 at Govt. Colleges, Bilaspur, Mandi, Hamirpur, Una, Nahan, Solan, Nalagarh, Sarkaghat, Chamba, Dharmshala, Rampur Bushar, Ponta Sahib besides Teachers Training College of Education Dharmashala, SVSD College Bhatoli, K.L.B Girls College Palampur, G.G.D.S.D. College Baijnath, G.G D.S.D. College Narwa, D.A.V College Daulatpur Chowk and D A.V. College Kangra.

The Prospectus are also available at NFF Ulubari Guwahati, KDMC Pangei (Imphal), Aminabad Inter College Lucknow, Ratnakar North Point School Hawra, Himachal Bhawan, New Delhi, CLH School Amritsar, S.D. School 32-C, Chandigarh, Comperhensive Degree College Aizawl, (Mizoram) & Veerabhadra Housing Board Colony Road, R.T. Nagar P.O. Kavalbyrasandra, Bangalore-32 & Study Circle of Postal Education Street No.-10, Himayat Nagar Hyderabad.

There will be no spot admission in Himachal Pradesh. However the admission outside H.P. will be conducted at selective places during July/Aug. 98.

Caution : The University or the ICDEOL has not appointed any agent to collect fees and application forms on its behalf. The students are advised to correspond direct with the ICDEOL Office.

Prof. O.P. Saraswat
DIRECTOR

INDIRA GANDHI INSTITUTE OF PHYSICAL EDUCATION & SPORTS SCIENCES (IGIPESS)

(UNIVERSITY OF DELHI)
B-Block, Vikaspuri, New Delhi-110 018
Ph. 5593497 Fax : 5549003

ADMISSION NOTICE : 1998-99

APPLICATIONS ARE INVITED FOR ADMISSIONS TO

(A) B.Sc. (Physical Education, Health Education and Sports), 3-year Degree (Seats-70). Eligibility : 40% marks in 10+2 or equivalent.

(B) Master of Physical Education & Sports (MPES), 2-year Degree (Seats-25). Eligibility : 50% marks in P.G.D.P.Ed./B.Sc. (P.E.,H.E. & S.) or any graduation degree with physical education background.

(C) Post Graduate Diploma in Physical Education (P.G.D.P.Ed.) 1-year Diploma (Seats-50). Eligibility : 40% marks in any Bachelor's Degree.

Please note that a candidate who is appearing in any qualifying Examination and whose result is awaited, may also apply.

Last Date for submission of completed application form

(i) B.Sc. (Physical Education, Health Education and Sports) is **8th July, 1998.**

(ii) Master of Physical Education & Sports and Post Graduate Diploma in Physical Education is **16th July, 1998.**

For more details, the prospectus along with application form can be collected from the office of the Institute from **29th June, 1998** on all working days on cash payment of Rs. 25/- or by sending a Bank Draft for Rs. 40/- in favour of the **Principal, IGIPESS payable at New Delhi** along with your complete postal address.

Advt. No. Adm./01/dt. 17.6.1998.

Dr. D.K. Kansal
PRINCIPAL

KODAIKANAL CHRISTIAN COLLEGE

Prakasapuram, Kodaikanal-624 104

IF YOU WISH TO

- JOIN AN UNDERGRADUATE OR P.G. PROGRAMME THAT GIVES YOU A DEGREE PLUS MANY CERTIFICATES/DIPLOMAS,
- ACQUIRE AN EDUCATION THAT MAKES YOU SELF CONFIDENT, AND
- BENEFIT FROM PROFESSIONAL PLACEMENT SERVICES.

APPLY IMMEDIATELY FOR ADMISSION TO
KODAIKANAL CHRISTIAN COLLEGE,
PRAKASAPURAM, KODAIKANAL-624 104.

THE ACADEMIC PROGRAMME INCLUDES :

A. EXPERT PREPARATION FOR COURSES AFFILIATED TO MADURAI KAMARAJ UNIVERSITY :

B.Sc. COMPUTER SCIENCE
B.Sc. ELECTRONICS
B.Sc. HOTEL MANAGEMENT AND CATERING SCIENCES
B.B.A.
B.COM and
M.A. (M.C.M.) MEDIA COMMUNICATION AND MANAGEMENT

B. ADDITIONAL REQUIRED ENRICHMENT DIPLOMAS AND CERTIFICATES (OFFERED WITHIN THE REGULAR SCHEDULE) :

SPOKEN ENGLISH AND PUBLIC SPEAKING
COMPUTER AWARENESS
FUNDAMENTAL MATHS
VALUE EDUCATION
HISTORY OF IDEAS

C. ADDITIONAL VOCATIONAL COURSES (two required for each major) :

TRAVEL AND TOURISM
SERVICE MARKETING
COMPUTER HARDWARE
HUMAN RESOURCE DEVELOPMENT
ADVANCED COMPUTER APPLICATIONS
TOTAL QUALITY MANAGEMENT
MARKETING
PERSONNEL MANAGEMENT
JOURNALISM
FRENCH

CONTACT : **REV. DR. FRANCIS SOUNDARARAJ**
PRINCIPAL, KODAIKANAL CHRISTIAN COLLEGE
PRAKASAPURAM, KODAIKANAL-624 104
Telephone : Office 42216 Res. 41236
Fax : 04542-41024

HURRY UP BEFORE SEATS ARE FILLED UP

DEPARTMENT OF SOCIAL WORK
UNIVERSITY OF DELHI

3, University Road, Delhi-110 007 **May 27, 1998**

Admission to 1998-99 Academic Session

M.A. (SOCIAL WORK)

The Department provides education in Social Work to both men and women leading to M.A. (Social Work) Degree of the University of Delhi. The Course is intended for those who seek careers in fields requiring knowledge and competence in social work, social welfare, social development, human relations, and social policy and planning. Last date for submission of applications is **10th July 1998.**

Application forms and prospectus are available on payment of Rs. 150/- per Registered post and Rs. 100/- at the counter. Limited number of seats in the Hostel are available. Applications may be submitted even in such cases where results are awaited. Enterance test will be held on WEDNESDAY 15TH JULY 1998 at 10.00 a.m. at the Department's premises only.

M.PHIL (ELIGIBILITY REQUIREMENTS)

Master's Degree or its equivalent in Social Work with 55% marks. Application forms available from the Department. Last date for submission of applications : **15TH JULY 1998** on a payment of Rs. 150/-.

PH.D.

Last date for submission of application : **15TH JULY, 1998.**

THAPAR INSTITUTE OF ENGINEERING & TECHNOLOGY : PATIALA
(DEEMED UNIVERSITY)
ADMISSION NOTICE

Applications on prescribed forms are invited for admission to the following programmes for the session 1998-99.

I. **M.Sc. Co-operative Materials Science Programme :** (Three years programme including one year of Industrial Employment, 10 seats)

Eligibility : Passed B Sc (Pass or Honours) with atleast 50% marks in the aggregate in Physics, Chemistry and Mathematics

II **Master of Engineering (M.E.) Programme :**

Regular Programme in Civil (Structures), Civil (Geotechnical) and Industrial (10 seats in each programme)

Scholarship of the value as approved by the competent authority from time to time is admissible to M.E. regular students who have qualified GATE examination

Part time programme in Civil (Structures), Environmental, Computer Sciecne, Electrical (Power & Machines), Industrial and Mechanical (Heat Power) - (10 seats in each discipline)

III **Doctor of Philosophy (Ph.D.) Programme :**

Departments : Chemical Engineering, Civil Engineering, Computer Science & Engineering, Electrical & Electronics Engineering, Mechanical & Industrial Engineering.

Schools : Basic & Applied Sciences, Biotechnology, and Management.

The Information Brochure alongwith the Admission Form and other details can be had on payment of Rs. 175/- at the counter OR by Post from the Registrar of the Institute on remitting Rs 200/- through Bank Draft in favour of the Registrar, Thapar Institute of Engineering & Technology, Patiala on any scheduled Bank of Patiala. Last date for postal-sale of Information Brochure is seven days before the last date for receipt of completed admission forms.

LAST DATE FOR RECEIPT OF COMPLETED ADMISSION FORMS
i) M Sc. Co-op. Materials Science : **15.07.1998 (Upto 5.00 P.M.)**
ii) M E. & Ph.D. **20.07.1998 (Upto 5.00 P.M.)**

REGISTRAR

CLASSIFIED ADVERTISEMENTS

ZAKIR HUSAIN POSTGRADUATE EVENING COLLEGE
(UNIVERSITY OF DELHI)
JAWAHARLAL NEHRU MARG,
NEW DELHI-110 002

Applications are invited for the following posts of Lecturers in UGC's approved grades ·

1. Economics - 1 Permanent,

2. Arabic - 1 Permanent,

3. History - 2 Permanent - (No 1 Specialisation in Ancient India) Reserved for SC/ST; (No . 2 Specialisation in Medieval India and Russian/European History) un-reserved,

4 Urdu - 1 Leave vacancy temporary/Likely to be made permanent,

5 Hindi - 3 No 1 Reserved for SC/ST, 2nd & 3rd un-reserved.

Qualifications : 1 Good academic record with at least 55% marks or equivalent grade at Master's level in relevant subject from a recognised Indian/Foreign University;

2 Should have cleared NET OR should have submitted Ph D Thesis/completed M Phil by 31 12 93

Prescribed Application Forms, available from College Office on a working day between 2 and 7 p.m , should reach the College **within 15 days** of the appearance of this advertisement. Those asking the Forms by post should send Postal Order of Rs 10 00 in favour of the Principal along with the self-addressed stamped envelope of 10" x 4" size. Outstation candidates may be paid single-one-way Second Class Rail Fare on production of cancelled Tickets

PRINCIPAL

HIMACHAL PRADESH UNIVERSITY
"RECRUITMENT BRANCH"
SHIMLA

ADVERTISEMENT NO. 1/98

Applications are invited (on prescribed form) for the following teaching/non-teaching posts so as to reach the Deputy Registrar, Recruitment Branch alongwith a crossed Indian Postal Orders of Rs 100/- (Rs 25/- for SC/ST) payable to the Finance Officer, H P University, Shimla-5, by **July 23, 1998 :**

I **Professor :** (Pay scale Rs 4500-7300 unrevised) in the following subjects of Teaching Deptts
Computer Science - 1, Music - 1 (Leave vacancy),
Education - 1, English - 1, Law - 1, Geography - 1 (Plan post)
Hindi - 1 (Leave vacancy), **Political Science - 1, Public Administration - 1.**
II. **Reader :** (Pay scale Rs. 3700-5700 unrevised) in the following subjects of Teaching Deptts :
Physical Education - 1, Yoga - 1, Tourism Administration - 1, Chemistry - 3 (Spl : one in Inorganic/Analytical Chem other two are in Organic Chemistry), **Buddhist Studies - 1, Computer Science - 2, Sociology - 1, English - 1** (LV).
III **Lecturer :** (Pay scale Rs. 2200-4000 unrevised) in the following subjects of Teaching Deptts :
a) (i) Open/General Category :
Physical Education - 2, Polymer Chemistry - 1 (Non-Medical Physical), **Music - 2,** (Spl one in Instt. Sitar and the other in Instt. Tabla), **Tourism Administration - 1, Political Science - 1, Environmental Sciences/Ecology - 1 Physics - 2.**
(ii) Reserved for SC Category :
Physical Education - 1, Painting - 1, English - 1, Law - 1, Psychology - 1, Commerce - 1, Botany - 1, Political Sc - 1.
(iii) Reserved for S.T. Category :
Physical Education - 1, Commerce - 1, Economics - 1, Music - 1 (Vocal), **Bio-Technology - 1** (Spl in Plant Bio-Technology, Bio-Chemical Engg/Immunology or Immunotechnology)
(iv) Reserved for O.B.C. Category :
Physics - 1, Management Studies - 1.
b) For International Centre for Distance Education & Open Learning :
History - 1, (Open). **English - 1** (Reserved for SC),
c) H.P. University, Evening College :
English - 2 (One is reserved for S C Category), **Hindi - 1** (Open), **Commerce - 1** (reserved for S C Category)
IV. Deputy Director/Officer Incharge (AERC) 1 (Pay scale Rs. 3700-5700 unrevised)
V **System Analyst - 1** (For HPU Computer Centre) Pay scale Rs. 3700-5700 unrevised)
VI **Programmer - 1** (For HPU, Computer Centre) Pay scale Rs 2200-4000 unrevised)
VII. **Medical Officer - 1** (GDO-II Male) . (Pay scale Rs 2200-4000 unrevised)

The qualifications for the above mentioned posts will be made available with the application form.

The eligibility of every candidate will be determined on the basis of qualifications acquired by him upto the last date fixed for the receipt of the applications.

Candidates called for interview will have to come to the place of the interview at their own expenses and bring with them their original research papers, degrees and certificates etc. for verification.

The University reserves the right to fill up or not to fill up the posts or to call only suitable candidates for interview The number of posts likely to be filled may vary

Application form alongwith detailed qualifications and other conditions can be obtained from the Deputy Registrar, Recruitment Branch, on payment of Rs 25/- in cash or by making a written request to him accompanied by self-adressed envelope of 23 x 10 Cms with postage stamps affixed worth Rs 2/- and a postal order of Rs 25/- drawn in favour of the Finance Officer, H P. University, Shimla-5.

NOTE : i) Applications received on plain paper, without Fee/required documents and received after the last date, shall not be entertained.

ii) Persons who have applied earlier for the above mentioned posts against Advt. No. 1/97, dated 14 1 97 for the posts of Lecturers in Commerce & Botany for S.C. category, Advt. No. 4/97, dated 27 2 97 for the posts of Reader in Physical Education, Yoga, Tourism Admn, Lecturers in Physical Education, Polymer Chem (Non-Med Physical), Music (Sitar), History-TCDEOL for Open category, Lecturers in Physical Education, Painting for S C category, Physical Education for S.T. category, Advt No. 5/97, dated 6 10.97 for Professor in Political Science, Pub. Admn, Reader in Chemistry (Inorg/Anal.), Lecturer in Political Science for S C. category, Deputy Director/OIR (AERC), System Analyst, Programmer, Medical Officer (GDO-II Male), Advt. No. 9/97, dated 21 11 1997 for Professor in Computer Science, Music, Reader in Buddhist Studies, Lecturer in English, Law, Psychology for S C category, English for SC for H PU. Evening College, Shimla, Commerce, Economics & Music (Vocal) for S.T. category, need not to apply again However, they may send additional information if any

iii) In case of applicants who have applied for the post of Dy. Director/OIR (AERC) advertised vide Advt No 5/97, dated 10.6.97 need not to apply again but their earlier applications will only be considered if they fulfil the latest qualifications for the said post.

iv) A person applying for more than one post should send a separate application form for each post.

REGISTRAR

TEZPUR UNIVERSITY
(A Central University established by an Act of Parliament)
Post Box -72, Tezpur-784 001

Advt. No. F.13-1/97 **Dated 18.06.98**

Applications are invited from eligible Indian citizens for filling up the following posts

1. Business Administration : Professor, 1 post, 2 Spl : Systems with Mathematical background.
2. English : Reader, 1 post, Spl · English literature. Expertise in Commonwealth literature/African literature/Indian writing in English.

UGC/AICTE (in case of posts at sl. 1) norms will be applicable.

Prescribed application forms and other particulars (specialisation, essential qualification, pay scales, application fee etc) may be obtained free of cost from the office of the undersigned either in person or on written request accompanied by a self addressed stamped (Rs. 3) envelope

Application forms will be issued upto 11th July, '98.

Candidates called for interview will be paid Ist class (for Professor)/II class (for Reader) train fare/Bus fare on the shortest route from actual place of residence/work in India on production of receipt/ticket

Last date of receiving completed appliation is 22 July, 1998.

Dr. M.R. Sharma
REGISTRAR

JAI NARAIN VYAS UNIVERSITY JODHPUR

(Establishment Branch)

No. JNVU/Estt/NT/98/5426   June 19, 1998

ADVERTISEMENT NO. 18/98-99

Applications are invited upto 23.7.1998 for one General post of Director Educational Media Research Centre, Jodhpur in the Scale of Rs 4500-150-5700-200-7300 (likely to be revised) sanctioned by the U G C on prescribed *form obtainable from this office on payment of* Rs. 10/- (Bank Draft/I.P.O.) in favour of the undersigned alongwith a self addressed stamped envelope of 27 x 12 cm size worth Rs 13/-.

The post is to be filled up on a Tenure basis for 5 years which could be extended for a further period of 5 years subject to a maximum of 60 years of age

Essential Qualifications : (i) A Master's Degree in *any subject with consistently good* academic record; (ii) About 10 years of regular service in Media or Mass Communication, specially Television, as Engineer or Producer/Dir or Researcher or Administrator; (iii) Good Communication skills to involve University academics into ETV production, and (iv) Leadership qualities to manage Media Technical and Administrative Staff and to coordinate production activity with Academic persons.

OR

An outstanding scholar with established reputation who has made significant contribution to knowledge in Mass Media (Television)

Age Limit : 55 years

Candidates who have applied against Advertisement No. 51/97-98 & 92/97-98 may apply afresh on prescribed form if they consider themselves eligible for the post in view of the new qualifications.

REGISTRAR

PANJAB UNIVERSITY, CHANDIGARH

(Advertisement No. 4/98)

Applications are invited for the following posts in the University Teaching Departments to reach Deputy Registrar (Estt.), Panjab University, Chandigarh by 20 July 1998:

1. PROFESSORS (Grade Rs. 4500-7300)

Biotechnology-1; Chem. Engg. & Tech.-6 (Engineering-1, Chemical Engg.-2, Chemical Technology-1 (Temporary), Applied Sciences/Chemical Engg.-1, Polymers-1); Microelectronics-1; Zoology-1, Education-1; English-1; French-1; Sociology-1; Guru Nanak Sikh Studies-1; Library & Information Science-1; Mass Communication-1; Department of Evening Studies· Economics-1.

2. READERS (Grade Rs. 3700-5700)

Anthropology (Physical Anthropology)-1; Biochemistry-1; Botany-2 (1 temp. but likely to be made permanent); Chemistry-5 (Physical Chemistry-2, Organic Chemistry-2, Analytical Chemistry-1); Chemical Engg. & Tech.-2 (Chemical Engg -1, Energy Management-1), Zoology-2 (Cell Biology-1, Protozoology-1); Chinese-1, Gandhian Studies-2; Punjabi-1 (School of Punjabi Studies); Physical Education-1; Political Science-1; History-1 (temp. but likely to be made permanent); Laws-2 (1 temp. but likely to be made permanent), Urdu-1; Sociology-2 (1 temp but likely to be made permanent); Mathematics-9 (Applied Mathematics-1) (2 temp. but likely to be made permanent); Computer Science & Applications-2; Library & Information Science-1; Department of Evening Studies: Political Science-1; Department of Correspondence Studies: Public Administration-1; Philosophy-1; Punjabi-1.

3. (a) LECTURERS (Grade Rs. 2200-4000)

Anthropology-3 (Physical Anthropology-2 (1 Temp. but likely to be made permanent), Demography-1 (Temp but likely to be made permanent); Biochemistry-1; Biotechnology-3, Chemical Engg & Tech (Environment Management)-1; Chemistry-5 (Physical Chemistry-1, Inorganic Chemistry-2) (1 temp. but likely to be made permanent), Organic/Physical Chem -1 (temp. but likely to be made permanent); Open-1 (temp. but likely to be made permanent); Physics-7, Ancient Indian History, Culture & Archaeology-2; Education-4 (1 temp. but likely to be made permanent), English-1, Gandhian Studies-1 (temp but likely to be made permanent); Physical Education-7 (Coaching-3); Political Science-4 (2 temp. but likely to be made permanent); Public Administration-1, German-1, History-1; Laws-6 (4 temp but likely to be made permanent), Sociology-2 (1 temp. but likely to be made permanent); Telgu-1; Malyalam-1, Tamil-1; Urdu-1, Mathematics-1 (temp but likely to be made permanent); Statistics-1; Department of Evening Studies: Mathematics-1; History-1; Department of Correspondence Studies: Sanskrit-1, Mathematics-1.

(b) LECTURER-CUM-CURATORS (Grade Rs. 2200-4000)

Anthropology-1, Ancient Indian History, Culture and Archaeology-1

4. INSTRUCTORS (Grade Rs. 1800-3200)

Music-2 (Hobby Classes) (Instrumental-1, Vocal-1).

5. STAGE CRAFT TEACHER (Grade Rs. 1600-2660)

Indian Theatre-1

Candidates for the post of Professor in French who applied in response to Advt No. 6/97 need not apply again

Advt. No. 6/97 insofar as it relates to recruitment to posts of Professors of Pharmaceutics and Pharmacognosy and Reader in Pharmaceutical Chemistry is hereby cancelled and fresh applications for these posts are invited by 20 July 1998 on the basis of revised qualifications contained in 'Detailed Instructions'. Last date for receipt of applications for posts of Readers in Pharmacology and Pharmacognosy and Lecturer in Pharmaceutical Chemistry, also advertised vide Advt No 6/97, is hereby extended up to 20 July 1998; candidates who applied in response to Advt. No. 6/97 need not apply afresh. Qualifications for these posts are given in 'Detailed Instructions'

15% posts of Lecturers will be reserved for members of Scheduled Castes and 7½% for members of Scheduled Tribes but these will be treated as unreserved if no suitable S.C./S.T. applicant is available. Vice-Chancellor could place before Selection Committee names of suitable persons for its consideration alongwith the applications received in response to the advertisement. Number of posts can be increased or decreased as per requirement at the time of selection.

Application form alongwith 'Detailed Instructions' containing qualifications, specializations, etc. can be had either from Cashier, Panjab University, Chandigarh, on payment of Rs. 75/- (Rs 30/- for SC/ST candidates) or from Deputy Registrar (Estt.) by sending a crossed A/c. Payee Bank Draft payable at Chandigarh of same amount in favour of Registrar, Panjab University, Chandigarh accompanied by a self-addressed stamped (worth Rs. 10/-) envelope of 30 cm x 12 cm; candidates abroad may apply on plain paper with full bio-data (eight copies) together with a fee of Rs. 75/- by a crossed A/c. Payee Bank Draft payable at Chandigarh in favour of Registrar, Panjab University, Chandigarh.

Bluebird

UNIVERSITY COLLEGE OF MEDICAL SCIENCES
(UNIVERSITY OF DELHI)
GURU TEG BAHADUR HOSPITAL
DELHI - 110 095

No. MC/ESTAB/2/11/98-1

Applications on the prescribed form are invited for the following teaching posts to reach latest by 31.07.1998

TEACHING

Department	Prof.	Reader	Lecturer				Sr. Demo./Sr. Resident			
			Total	SC	ST	Gen	Total	SC	ST	Gen
Anatomy	-	-	1	1	-	-	2	-	1	1
Biochemistry	-	-	-	-	-	-	2	1	-	1
Physiology	2	1	-	-	-	-	3	1	1	1
Pathology	-	-	1	-	-	1	4	1	1	2
Pharmacology	-	1	1#	-	-	1	3	-	1	2
Microbiology	1	-	-	-	-	-	3	1	-	2
Forensic Medicine	-	-	1	-	-	1	1	-	-	1
Preventive & Soc. Med.	1	-	1+1@	1	-	1@	1	-	-	1
Medicine	-	5*	1**	-	-	1	2+1***	-	1	1+1***
Pacdictrics	-	1	2	1	-	1	1	-	1	-
Dermatology & SID	1	1	-	-	-	-	1	1	-	-
Surgery	-	1	2	1	-	1	2	-	-	2
Orthoepaedics	-	-	2	1	-	1	-	-	-	-
Ophthalmology	-	1	-	-	-	-	1	1	-	-
E N.T	-	-	1	-	-	1	2	1	-	1
Obsr & Gynae	1	2	-	-	-	-	2	-	1	1
Radiology	-	-	3	1	-	2	1	1	-	-
Anaesthesiology	1	1	2	1	-	1	3	-	1	2
Phychiatry	1	1	1	-	-	1	1	-	-	1
Dentistry	1	-	-	-	-	-	2	1	-	1

* Two posts for Medicine, one each for cardiology, Neurology and one for Tuberculosts and Chest Diseases

** For Tuberculasis and Chest Dieases

*** One for Tuberculosts and Chest Diseases.

# For Pharmaceutical Chemistry

@ One Post for Biostatistics.

Pay Scales : (Pre-revised)

1.Professor		Rs. 4500-150-5700-200-7300
2.Reader	:	Rs. 3700-125-4950-150-5700
3.Lecturer	:	Rs. 2200-75-2800-100-4000

Non-practising Allowance at Govt. rates is admissible to the persons with Medical Qualification.

Sr. Demo./Sr. Resident : Rs. 3150-100-3350 (Pre-revised)

(with medical qualification) Rs. 2000-60-2120 (Pre-revised)

(with non-medical qualification)

NOTE :

1. For the posts of Professor/Reader. Other things being equal preference will be given to SC/ST candidates.
2. It will be open to the College to consider names of suitable candidates who may not have applied. Relaxation of any of the qualifications may be made in exceptional cases on the recommendation of the Selection Committee.
3. The College reserves the right not to fill up any of the vacancies advertised, if the circumstances so warrant.
4. 3% posts of Lecturers are reserved for physically handicapped candidates.
5. Upper age limit for Sr. Resident/Sr. Demonstrator : 33 years as on 15.08.1998 (relaxable upto 5 years in case of SC/ST candidates :.

Contd...

NON-TEACHING

1. Veterinary Officer (one post) Rs. 2200-4000 (Pre-revised) + N.P.A. on Govt. rates.
2. Sr. Technical Asstt. (Computer) : (Two Posts out of which one reserved for SC) Rs. 5500-175-9000
3. Statistics Asstt : (Two posts) (out of which one post reserved for SC) : Rs. 4500-125-7000
4. Projectionist : (One Post) Rs. 4500-125-7000
5. Audio Visual Asstt : (One Post) : Rs. 4500-125-7000
6. Stenographer; (Three Posts) (out of which two posts reserved for SC and One post for ST) : Rs. 4000-100-6000
7. Plumber (One post) : Rs. 3050-75-3950-80-4590.
8. Anxuillary Nurse Midwife : (Two Posts) (out of which one reserved for SC) : Rs. 3050-75-3950-80-4590.

All posts carry usual allowances at the rates prescribed by the university from time to time.

Application fees : Application fee of Rs. 100/- (Rs. 25/- in case of SC/ST) for teaching posts and Rs. 20/- (Rs. 5/- in case of SC/ST/OBC) for Non-teaching posts (NON-REFUNDABLE) in the form of Indian Postal Order/Demand Draft in favour of the **Principal, University College of Medical Sciences payable at Delhi/New Delhi.**

Application forms and other details regarding prescribed qualifications and experience can be had from the Reception Counter, University College of Medical Sciences & Guru Teg Bhadur hospital, Dilshad Garden, Delhi-110095 on all working days from 9.00 to 4.00 either personally or on written request along with a self addressed envelope of size 28cm x 13cm with postage stamps worth Rs. 8/- referring to Advertisement No. MC/Estab/2/11/98-1. The cost of Form is Rs. 5/- which can be sent by Indian Postal Order drawn in favour of the Principal, University College of Medical Sciences, Delhi-110095.

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ELIGIBILITY : VHSC/PUC any group, DURATION 3 Years

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